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EVALUATION AND SYNTHESIS OF RESEARCH STUDIES RELATING TO MUSIC EDUCATION.

BY- SCHNEIDER, ERWIN H. CADY, HENRY L.
OHIO STATE UNIV., COLL. OF EDUC., COLUMBUS

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RESEARCH DATA IN THE FIELD OF MUSIC EDUCATION WHICH HAD ACCUMULATED DURING THE YEARS 1930 THROUGH 1962 WERE BROUGHT TOGETHER AND EVALUATED. A COMPILATION PROCESS PRODUCED 9,150 INFORMATION ITEMS, CONSIDERED TO CONSTITUTE ALL POSSIBLE MUSIC EDUCATION RESEARCH DATA COMPLETED DURING THE SUBJECT TIME PERIOD. OF THESE TOTAL ITEMS, 273 ARE ABSTRACTED AND MANY OTHERS LISTED IN THE REPORT. RESEARCH FINDINGS IN THE DATA WERE SYNTHESIZED ACCORDING TO SPECIFIC AREAS OF FUNCTION AND METHODOLOGY. FINDINGS WERE ANALYZED FOR IMPLICATIONS FOR CURRENT PRACTICE AND NEEDED RESEARCH IN THE MUSIC EDUCATION FIELD. (SEE ED 010 299.) (JH)

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EVALUATION AND SYNTHESIS OF RESEARCH STUDIES RELATED TO MUSIC EDUCATION

Cooperative Research Project No. E-016

Erwin H. Schneider
Henry L. Cady

The Ohio State University
Columbus, Ohio
1965

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PREFACE

The practices and concepts of music education are being examined today by persons both within and outside the profession. Answers are being sought to long-standing questions; new questions are being raised. The profession is earnestly seeking that body of knowledge which will provide both the philosophical framework and the practical guidelines for the pursuit of its endeavors. The opinions and speculations of the past no longer will suffice. And, for the first time perhaps, many music educators are looking to research for answers and guidance.

This volume is a beginning attempt to meet this expressed need of the music education profession. It attempts to bring together in synthesized form research which is relevant to music education and which is competent as research. It covers that research (primarily doctoral dissertations and published reports) which was completed during a thirty-two year (1930-1962) period of time.

The reader who peruses this volume will find that the research completed during these years, and that research reviewed in this volume, does not provide much data for solving problems in music education today. It also will be evident that much of what has been considered research in music education is not directly related to this area, and in fact, is not research as was conceived in this project. Relatively few implications for practice can be drawn from the results of the research which has been reviewed and synthesized. The review and synthesis do reveal, however, the pressing need for relevant and competent research in music education, and identifies some of the topic areas needing research attention. These later implications, possibly, are the greatest value of this work to the profession.

Many persons contributed much time and effort in the completion of this project. The authors particularly wish to thank the following graduate students for their assistance in searching the literature, developing the catalogue of possible research titles, and in some cases, preparing abstracts of research: Carol Maize, Gary Warmick, Sherman VanderArk, John L. Davis, Dorothy Imhoff, John Palmer, and Shirley Smith. Special recognition and gratitude is expressed to Carl Chapman for his assistance in reviewing and abstracting selected research reports, and to Woodford Zimmerman for his writing the first draft of the abstracts and the synthesis of the research on the teaching-learning process.

A special debt of gratitude also is due Dr. Charles H. Benner who read the manuscript in its entirety and offered many valuable suggestions for its improvement.

The authors also are deeply grateful for the understanding and patience shown by both Maxine Weingarth, who assumed the responsibility of preparing and filing the bibliography cards and supervising the procurement of research documents, and by Ruby Burnham, who prepared the final copy of the report.

Finally, the authors wish to thank the interlibrary loan office of The Ohio State University Library for the excellent services rendered in the procurement of documents, and for the many courtesies extended to the authors in their search for needed documents.

Erwin H. Schneider
Henry L. Cady

Columbus, Ohio
March, 1966

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CHAPTER I

PROBLEM AND OBJECTIVES

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PROBLEM AND OBJECTIVES

Introduction

The three greatest needs for the continued growth of the music education profession today are believed to be: (1) an evaluation and synthesis of the results of completed research relating to problems in music education with implications for current practices and needed research, (2) dissemination of the knowledges gained from research of this type, and (3) scholarly research on pertinent problems in music education. It was with the first of these needs that this project was primarily concerned. Subsequently, due to an enlargement in the scope of the project, the need for dissemination became an equal concern.

A body of literature relating to music education,* which appears to consist of research reports, has been growing since the nineteen-thirties. This literature has not been sorted, evaluated, or brought together in any viable form. Much of it is unpublished. The existence of this literature is unknown to most members of the music education profession. Even research-minded professors may not be fully aware of its existence. In its present scattered, unorganized form, it is of little value, if any, to music teachers in the public schools. It was estimated that this body of literature, supposedly research studies, consisted of approximately 4000-4500 titles.

This literature is found in a variety of independent sources. Very little of it has been reported in professional music or music education publications.

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*Music education is defined here in general terms as the teaching of music in the classroom situation as is generally found in the public schools. A refinement of this definition is presented in PART II of this report.

The professional literature which is most accessible to music teachers in the schools, such as textbooks, handbooks, journals, and professional magazines, generally does not contain the reports or the findings of research. Only rarely is reference given to a research study. The main contents of such volumes are primarily opinions and philosophical constructs. They present little verifiable data relative to the learning and the teaching of music.

Some studies, primarily historical reviews, surveys, and lists of teaching materials, have been published since 1953 in the Journal of Research in Music Education.[1] Few experimental studies have been included in the contents of this publication, which has not had a wide distribution in the music education profession.

Published reports of research relating to music education are found more often in various psychological, sociological, and educational journals. Generally, music teachers are not aware of the existence of these reports because these non-music journals are not readily accessible to them. School libraries rarely subscribe to such journals and music teachers usually do not become members of such professional groups.

The largest body of apparent research studies related to music education is found in master's theses, doctoral dissertations, and in faculty research. Most of these studies have not been published. Some can be obtained through interlibrary loan services but not by music teachers in the public schools. Some can be purchased on microfilm, but school budgetary considerations and the lack of research sophistication on the part of practicing members of the profession appear to be factors which have limited interest in such purchases.

The Music Educators National Conference has published lists of such titles on four occasions.[2,3,4,5] These publications contain only a partial listing of studies completed during the years 1932 through 1963 and are not restrict-

ive to music education. Abstracts of some of these studies are published in Dissertation Abstracts.[6] These abstracts follow no set form of reporting and generally are not in sufficient detail for adequate assessment of validity or value. They are not known to most music teachers and are not easily obtainable by them.

Although a body of apparent research studies related to music education exists, these studies have not been brought together or reviewed to determine their status as research. Their value has not been assessed. They are not known to the profession at large, and generally are not available to music teachers in the public schools.

The identification of the research studies contained in this literature, an evaluation of the contents, and a synthesizing of the findings, would constitute the beginnings of an organized body of research information relating to music education. Such information, to the extent it is found in this literature and is made available, undoubtedly would have some effect on the improvement of current instructional practices in the public schools. It also would indicate areas in need of research, current trends, and unique experimental designs, which would provide basic information for use in undergraduate and graduate courses of study in higher education as well as a basis for formalized, continuing research programs.

The need to review the apparent research literature, to specifically identify research studies, and to collate and synthesize valid findings, has been recognized by persons in the profession for many years. As early as 1928, Kwalwasser, Dykema, and Earhart were aware of this need when they published a compilation of research studies with an annotated bibliography covering the years 1913 through 1925.[7] Earhart further emphasized this need when he suggested in 1936 that a Coordinating Council be established to centralize the

information on research in music education.[8] As recently as 1963, Petzold indicated that ..."it is essential that some group or agency undertake the laborious task of collating and summarizing significant research in music education."[9]

Problem

The lack of an organized body of research information in music education, the need for identifying research studies in a large body of literature, the need for synthesizing knowledges gained from competent research for use in the profession, and a system for the dissemination of these knowledges, constituted the problem of this project.

The literature listed in the project was confined to that which was produced during the years 1930-1962. The year 1930 was selected somewhat arbitrarily as a beginning date because it was at approximately this time that the need for research in music education was being emphasized by leaders in the profession[10,11,12] and reference to research reports began to appear with increasing frequency in the literature.[13,14,15,16,17] The year 1962 was accepted as a terminal date because the project began in October of 1963. It was believed that, typically, libraries complete the processing of unpublished documents several months after these documents have been deposited in the offices of a university. Therefore, to be certain that all documents would be seen which were produced in a given year, the year 1962 was selected as the latest year in which this coverage would be possible.

Objectives

It was the purpose of this project to bring together the research data relating to music education which had accumulated between the years 1930 through 1962, to evaluate the data, to synthesize the findings according to

specific areas of function and methodology, and to indicate implications for current practices and needed research in music education.

The specific objectives of the project, in sequential order, were as follows:

1. to compile a complete list of apparent research studies related to music education for the years 1930 through the year 1962,
2. to select, categorize, evaluate, and abstract relevant and competent research studies specifically related to basic problems in music education,
3. to prepare a synthesis of the findings according to specific areas of function and methodology in music education,
4. to identify unique research designs and trends in research in music education,
5. to indicate implications for current practices in the schools and the specific needs for further research in music education, and
6. to provide the Educational Research Information Center (ERIC), of the U. S. Office of Education, with index terms, abstracts, and microfilms of competent research in music education.

Organization of Report

The concepts, definitions, and rationale developed and utilized in the process of identifying relevant and competent research are presented in CHAPTER II of this report. The procedures and materials used are given in CHAPTER III. The results of the project in terms of an overall evaluation of the literature and a synthesis of research findings are presented in CHAPTER IV through CHAPTER IX. An overall status and evaluation of the apparent research literature produced during the years 1930 through 1962 is presented in CHAPTER IV.

Syntheses of competent research are presented as follows: CHAPTER V--Research Relating to the Music Teacher, CHAPTER VI--Research Relating to the Music Student, CHAPTER VII--Research Relating to the Teaching-Learning Process in Music, CHAPTER VIII--Research Relating to Constraining Factors in the Teaching-Learning Process in Music, and CHAPTER IX--Research Relating to the Program of Music Education. CHAPTER X contains a summary of the work of the project, conclusions regarding research in music education and its implications for practice, with a discussion devoted to problems and needs in research in music education. Abstracts of competent studies, the materials used in the project, and listings of studies identified and reviewed, bibliographic sources, and the cooperating institutions, are presented in the appendices.

References

1. Britton, Allen P. (Ed.). Journal of Research in Music Education. Washington, D.C.: Music Educators National Conference, 1953-1965 (Quarterly).

2. Small, Arnold M. (Ed.). Bibliography of Research Studies in Music Education, 1932-1944. Chicago, Illinois: Music Educators National Conference, 1944.

3. Larson, William S. (Ed.). Bibliography of Research Studies in Music Education, 1932-1948. Washington, D.C.: Music Educators National Conference, 1949.

4. Larson, William S. (Ed.). Bibliography of Research Studies in Music Education, 1949-1956. Washington, D.C.: Music Educators National Conference, 1957.

5. Gordon, Roderick D. "Doctoral Dissertations in Music and Music Education, 1957-1963." In Allen P. Britton (Ed.), Journal of Research in Music Education, 13:1 (Spring, 1965), pp. 45-55.

6. Dissertation Abstracts. Ann Arbor, Michigan: University Microfilms, Inc.

7. Kwalwasser, Jacob, Peter W. Dykema, and Will Earhart. "Research in High School Music." In "The Development of High School Curriculum," Sixth Yearbook of the Department of Superintendence, Washington, D.C." National Education Association, 1928, p. 254.

8. Earhart, Will. "Coordination of Research in Music Education." Music Educators National Conference Yearbook, 1936. Chicago: The Conference, 1936, p. 283.

9. Petzold, Robert G. "Directions for Research in Music Education." Council of Research in Music Education. Urbana, Illinois: College of Education, The University of Illinois, 1963, p. 19.

10. Beattie, John W. "Function of Research." Music Educators National Conference Yearbook, 1934. Chicago: The Conference, 1934, pp. 89-92.

11. Dykema, Peter W. "A Review of Achievements and an Outline of Studies Still to be Made." Journal of Proceedings of the Music Supervisors National Conference, 1928. Chicago: The Conference, 1928, pp. 281-284.

12. Kittle, J. Leslie. "Music Education and Scientific Research." Music Supervisors Journal, 18 (May, 1932), 37.

13. MacLatchy, J. H. "Review of Research in Music Education." Review of Educational Research, 1 (1931), 31.

14. More, Grace Van Dyke. "Music." Review of Educational Research, 2 (1932), 66.

15. Whitley, Mary T. "Music." Review of Educational Research, 4 (1934), pp. 501-2.

16. Byrens, F. C. "Recent Experiments in Music Appreciation." Music Educators National Conference Yearbook, 1935. Chicago: The Conference, 1935, pp. 198-204.

17. Kwalwasser, Jacob. "Curriculum Investigations at the Elementary and Secondary School Levels: Music." Review of Educational Research, 4 (1934), 175-178, 233-234.

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CHAPTER II

CONCEPTS AND RATIONALE

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CONCEPTS AND RATIONALE

The analysis and evaluation of a body of apparent research literature for the purpose of obtaining knowledges for application in a professional field requires that certain controls be established to insure that the information selected is relevant and valid.

The compilation of a list of titles in an area of study which appear to indicate research reports, due to either the context of the title, source of the document, or a published classification of a title, is a time consuming, but not a very difficult task. The determination, however, of whether a specific study is relevant to the area of study, if it is actually a research report, and if a report of research, if the work was handled in a competent and acceptable manner, is an entirely different matter. Decisions of these types require that definitions be clarified and refined, and that guidelines be established for making such judgments.

The problem of determining the relevance of any topic to a specific area of study demands that the perimeters of the area be quite clearly outlined in specific and operational terms. In the process of clarification, value systems evolve and a taxonomy of concepts emerge which provide the necessary guidelines for determining relevance. In some fields of study, definitions have become well established and accepted, and the determination of the relevancy of any topic is a relatively simple matter. In other fields, specific and precise concepts do not exist and almost any topic, under some rationale, could be considered relevant to that field. The latter is the case in music education. Misconceptions abound as to the perimeters of research in this area of endeavor.

Until an area of study is clearly delineated, the relevancy of topics to that area cannot be truly determined, nor can an organized body of knowledge be developed which would provide the basis for the refinement of existing knowledges, or the development of new knowledges in that area.

Because of the many and varied concepts that seemingly exist relative to what music education is, and what constitutes relevant and competent research in this field of endeavor, it is necessary before studies can be selected for review and abstracting, to establish the guidelines for making such decisions. The material which follows presents the concepts and rationale developed for this use in this project.

Definition of Music Education

A clarification of the meanings and concepts involved in the term, and the activities, known as "music education" was attempted through means of several definitional techniques.[1,2,3] It was necessary to develop a definition which would clearly establish the pecularities and essential characteristics or nature of music education. The definition had to describe what music education was in operational terms to be useful in the project. Thus, the philosophical framework from which the definition developed was frankly pragmatic. The emphasis was on the clarification of the true role of a distinct human behavior.

Synonyms and Antonyms

Synonyms for music education do exist in the literature. There are at least two which have had their vogue in the history of music instruction in the schools. These are "school music" and "public school music." The incidence of their use seems to have diminished in the past two decades and the term "music education" has supplanted them. All three of these terms are

generally used when discussing music teaching and music learning in the school situation as well as the factors which contribute to these processes. The issue of public versus private education is sometimes an issue implicit in them, but with the advent of the term "music education," sectarianism has diminished to some degree.

Fragmentary terms also are used at times as synonyms, such as "music learning" and "music teaching," but these are not inclusive enough to be considered true synonyms. Music teaching and music learning are two fundamental aspects of one basic process. They cannot be considered as synonyms except in careless usage.

It seems that no synonym actually expresses the complexity included in the term "music education." To consider it as "public school music" is to infer erroneously that parochial and other non-sectarian schools are unconcerned with this aspect of education. To consider music education as "school music" is to explicitly exclude the essential relationship of higher education to the numerous aspects of music in elementary and secondary education. Music education as a term seems to have been adopted because of its generalizability to the process as a whole and its collective characteristic.

Antonyms for the term "music education" are inappropriate. As one considers the nature of music education, it seems to be more of a process than a thing. It does include objects and people, but only in so much as they contribute to some kind of action leading toward a constantly changing state. In short, music education seems to be an operation. To describe it by an antithetical or opposing term would be to describe a non-operation. One could not refer to "non-music education" as an antonym. This term, or any equivalent for this antonym, does not exist in the vocabulary of music educators.

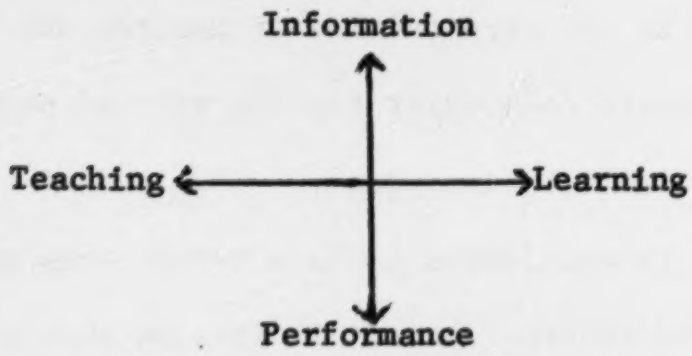
Classification Analysis

The term "music education" is a composite term derived from two genera--music and education. Because of this, music education is a "hybrid" area in both meaning and practice.

By way of academic cross-pollination and societal need, it suffers from the lack of a definitive status, especially in academia. The result of this bimodal relationship is a discipline-wide ambivalence, especially in higher education. In one institution, music education may be identified with a school of music and administered through that organization. In another, music education may be included in a school of education and administered through that organization. This ambivalence is also manifested in the type of professional curriculum for the student in music education which may vary from a music performance or music history oriented series of courses to an overabundance of courses in methodology. It is further related to the longstanding and seemingly eternal argument of content versus methodology which is engaged in by persons in education and in music who would instruct the other parent of the hybrid what it should or should not contribute. Interestingly enough, this very debate has created the hybrid "music education." As such, it is differentiated from both derivative genera. Thus, it can be considered a genus in itself.

In order to determine what music education is, one must ask the question "What sort of a thing is it?". In answer, one may offer the concept of interaction between two sets of polarities. The basic concern of the music educator is how to teach music so that information and aesthetic experience result in concepts of what music is and in the love of experiencing music. One set of polarities may be considered to be the teaching-learning process in terms of psychological and sociological information. Another set of polarities is the

spectrum from spectator to participant or from information to performance. These two sets of polarities intersect as follows:



It is the concern and direct involvement in the point of intersection which differentiates music education as an endeavor. In fact, there are numerous points of intersection. These intersections are the fundamental characteristic of the genus "music education." This is its differentia from all other musical endeavors and all other educational endeavors. Some of its denotata thus become the teaching of music reading, the teaching (directing) of performing groups, the teaching of theory, and the instruction of college students in the methods and techniques of teaching the substance of musical art and its varieties of experiences. This list of denotata could proceed to considerable numbers with increasing specificity. It is doubtful that a heirarchy would result, but most certainly a pattern of relationships would emerge. The term "process" applies to music education because there are numerous procedures involved. The kinds of procedures and their appropriate techniques form the genus "music education."

One other aspect of these polarities must be considered, namely, the mutual relationship of the two axes. The information-performance axis is representative of the parent genus, music or content. The teaching-learning axis signifies the parent genus education or methodology. If the child is the primary concern, then, what he is and how he should be treated is the primary concern in music education. However, that concern must be in terms of

his musical development or music has no reason for being in the school. Thus it seems that music education has a more basic concern in the problems of reaching the child rather than in the perpetuation of musical art. Parenthetically, it should be stated that music does exist for the sake of people because people ordain it to be so and not vice versa.

Music education thus is considered to be a hybrid area evolving from the meeting of two concerns and content areas. It follows that it must utilize both in order to contain both. The facts of methodology as well as musical art must be the sine qua non of the music education process. It should be accepted that these are assimilated by the professional personnel and that the materials essential to the process are understood and extant. The utilization of these for the enrichment of children and young people is a basic characteristic of music education. For the purposes of definition, it is irrelevant that some forms of music education fail to achieve this kind of operational level. Further, it is irrelevant to indicate the lack of factual information in some music education persons. Such irrelevancies are based on the frailty of human flesh and not on the differentia that is being discussed here. No matter what the inadequacies of practice may be, the distinctive characteristic of music education is a process or an operation which is designed for the transmission of knowledge, skills, and aesthetic experience in music.

Comparative Analysis

A comparative analysis of music education beside its sister endeavors in music and other fields, helps to further reveal what music education is, and as importantly, what it is not. Several comparisons will be made which will serve as examples of many possibilities in this realm. A complete catalogue of comparisons would be a formidable task and of questionable value.

1. Music History is an essential element in the work of the music

educator. It is part of a basic background directly related to the quality of education he can give the children and young people under his tutelage. The information and processes of musicology are important to the music educator in so much as they provide him with literature and historical information to be taught to his students as he leads them to an understanding of their cultural matrix. The information of music history and the varieties of music literature are included in what children learn or should learn. Thus, the subject and the pursuit of music history and literature is related to the music educator's competency, but it also is related to the competency of other types of musicians. The pursuit of historical information and the resultant competency are not a distinguishing characteristic, a differentia, in a definition of a music educator or of music education. Therefore, it is not a contributing element to what is peculiarly different in the music educator as a class or in music education as a class of endeavor. It is, on the other hand, a distinguishing characteristic of the historian in music.

2. Music Theory (and experience in the art of musical composition) is also an element in the fundamental competency of a music educator. It, too, is what children learn. The relationship of music theory to music education is similar to that of music history. Music theory is not the primary concern of the music educator and it is not a distinguishing characteristic, a differentia, because the value of music theory is just as great to the performer and the music historian. It is, however, a distinguishing characteristic in the definition of a music theorist or composer.

3. Musical Performance is related to music education and the music educator in much the same way that music history and music theory are related. There is one added difficulty in equating the role of performance in music education to the roles of history and theory. That difficulty is tradition and practice. One finds such equations in much of the literature about music education, but one does not find a counterpart in the areas of secondary school theory and history for the annual spring competitions in the performance of music. It must be acknowledged that regardless of ideals, the performance of music actually plays a greater part in music education than any other activity. This does not lead to the proposition that music education is the performance of music. It does lead to the proposition that a major endeavor in music education as it is practiced in secondary schools is the performance of music. However, that proposition is not a statement of a distinguishing characteristic, a differentia, of music education because the peculiar characteristic of the professional performer of music is the performance of music. By degree and avowed purpose, music education and its practitioners cannot be found equal in intention and practice to the professional performer. Too, the theorist who composes at the piano and performs his work publicly would take exception to such an equating of performance and music education. It must be concluded that musical performance is not a distinguishing characteristic of music education, but only receives greater emphasis in practice than music history or music theory.

4. Psychology of Music is a relatively recent area of knowledge.

Information from this field of inquiry is part of the basic educational background of the music educator. The psychology of music seeks to answer questions about how human beings perceive music, react to it, and produce it. It sometimes suggests answers as to "why" these behaviors occur. It has applied itself, to some extent, to the learning process in music. An examination of "how" human beings behave in any situation is actually an analysis of a process or an operation. Thus, the psychology of music applied to the teaching-learning process, would be a study of behavior as it functions while transmitting or receiving musical experience. As has been seen in the preceding analysis, no strictly musical area is primarily concerned with the teaching-learning process in music. This is also true of the psychology of music. The teaching-learning process in the school classroom is not its primary concern. This is not the distinguishing characteristic of the psychology of music.

5. Sociology of Music is also a recent area of inquiry. Its stage of development may be considered to be embryonic. Although somewhat undifferentiated, inquiries have been made by scholars concerning the social milieu in which music functions, and to a lesser degree, the influence of social factors on the music program in the schools. Much of the latter inquiry is social-psychological, e.g. attitudinal studies, interest surveys, in-school and out-of-school participation, etc. A focal point of this type of inquiry is the concern for a realistic concept of the social nature of the student, the teacher, and the culture of which they are a part. In short, sociological studies related to music education seem to be concerned with the social elements involved in the teaching-learning process. This

is, however, only one of the many concerns of this area of study. The distinguishing characteristic of the sociology of music is not the teaching-learning process of music in the social setting of the school.

6. Education is a gross term which identifies all of the endeavors involved in, and related to, the teaching-learning process. It is one of the genera from which the hybrid, "music education," has evolved. All of the endeavors in education are found in music education. What is not found in education is found in the genus, music.

Educationists are in reality the only people who are ultimately and primarily concerned with the educational process. Others may be interested, helpful, or even partially involved, but the concept of "primary" would seem to mean "primary" involvement. Even parents are not educators in a formal sense of the word because implicit in the term "educator" are certain skills and competencies. To imply that parents, ministers, music theorists, professional performers, et al, have these skills and competencies would be to say that such skills and competencies are indistinguishable as a class and, therefore, are a semantic myth.

It is also true that educationists cannot be equated with musicians, the persons in the other genus of music education. Their skills are not identical nor are their intentions identical. Where these two genera meet is in the music teacher in the elementary and secondary school and in that division of higher education which is primarily concerned with the problems of the teaching-learning process in music as promoted in the schools.

7. English Education is, like music education, a "hybrid" area. Wedded to the knowledges of and about English are the knowledges about appropriate teaching techniques and choices of subject matter for a specific teaching task within the goals of education and, specifically, English education. Music education is similar in organization. Its dissimilarity lies in the subject matter taught and the methodologies which are peculiar to the teaching of the musical art. Enlike English, music is a nonverbal form of expression and requires significantly different techniques in the teaching-learning process. Any comparison between the two rests basically on their hybridic genus characteristic and the resultant ambivalent relationships with English or Music and Education.

8. Art Education is perhaps the closest comparison that can be made to music education. Art education is concerned ultimately with sensitivity to form, color, mass, etc. The music educator is equally concerned with the equivalents of these in sound. Both the music and art educator are primarily concerned with the teaching and learning of these nonverbal elements in the elementary and secondary schools. They are both concerned with the improvement of a general public taste through the teaching of the arts to children and young people. "How" to teach children, and "how" they learn, is more of a concern by degree than what is taught. This does not imply that the quality of what is taught is not considered important. There is little disagreement among those who work in the area of art education and music education as to what should be taught. The problem is how to educate a person to nonverbal, non-

numerical, nonpragmatic experiences in a society which is materialistic and basically oriented to numerical and verbal forms of communication. Art education and music education are very similar endeavors with very similar problems. Their dissimilarity lies in the medium of nonverbal communication with which each is concerned.

Operational Analysis

Music education is a purposeful activity having certain objectives. As such, there are processes through which persons give and receive the content of music. Because it is procedural, because there are functions for persons and things, because there are events which require a certain sequence, because even the term "performance" is in the common vocabulary of the musician, music education can be considered an operation. Synonymously, it may be considered a process. It is a purposeful process in which information is transmitted, skills are learned, and aesthetic sensibilities are changed.

Operations are purposeful in that they have ends, purposes, or objectives. Music Education has the primary objective of educating young people to the art of music. An analysis of this objective leads to multiple meanings in terms of various contexts. From one point of view, there seem to be two levels at which these objectives appear to influence educational endeavors -- the societal level and the individual level. At the societal level, educators aspire to a general improvement of cultural activity or, more specifically, a more general use of the highest level of achievement in musical art. This is vague, but nevertheless, it is a conceptual framework for the music education profession as a whole. At the individual level, this objective is no less limited but, in the better music education programs, they are tailored to meet the needs and idiosyncracies of the student and his peers. This meeting of needs may result in forms of music in the school which are not immediately commensurate with the overall objective for music education at a

societal level.

The meeting of individual needs in the school situation leads to another meaning of music education which is apparently more accurate. Literally, music education (the teaching-learning process in music) occurs only in the classroom at a particular time, if one assumes the concept of formal instruction existing basically in the school. All other implications for the term "music education" are technically extensions of the term. Conversely, there is no such thing as music education on a national basis. There are only persons and facilities. The process exists only at a particular time between the teacher and the student(s). This may seem to be a picayune point but in reality it is a basic concept to an understanding of the differentia which distinguishes music education and particularly the problems involved in it.

The primary objective of music education can be subdivided into three major subpurposes -- the transmission of the musical heritage or musical culture in the form of its great music, past and present; the acculturation of the individual in terms of the practical skills which will enable him to function in the music of his society; and, third, the development of the individual's aesthetic sensitivity or his sensitivity to the beautiful in music. Thus, the process of music education is comprised of three basic subpurposes requiring three mutually reinforcing and overlapping processes or, more accurately, subprocesses. Each of these subpurposes contributes to the overall objective of a musically educated person. Each has its own system within which individuals and materials function. The various functions of personnel and materials in each of these subprocesses comprise the concerns and process of music education.

If operations are purposeful, and if they have processes by which they achieve those purposes, then a starting point may be inferred for operations. In the teaching-learning process in music, the end is a musically educated

student. The starting point of the process seems to be the person who initiates the teaching-learning process, who imparts information, teaches skills, and determines the kind of experiences which will aid the development of aesthetic sensitivity. The person or the starting point in formal music education is the teacher. As such, the process may be considered the shifting of experience from one locus to another, from the teacher to the student. In short, the quality of the education of the student is directly related to the quality of the education of the teacher. No teacher can teach effectively that which he has not experienced. Also, students can learn only what they experience. The teacher's experiences are a direct determinant of the student's experiences. Thus, the quality of not only the student's education, the primary objective, but also that of the teacher is the concern of music education. It should be noted that the quality of the starting point of the process, the teacher, is a cooperative concern in all education, but that the information and skills necessary to the teacher as a functioning element in the process of music education itself is the peculiar contribution of music education and is a distinguishing differentia. Too, the quality of the objective, the musical learning of the student, is a primary concern of music education which is delegated to it by education as a whole.

Definition Summarized and Specified

A summary of the foregoing discussion indicates that the term "music education" may be defined in several ways and not in others. First it has had synonyms which have aptly focused attention on a major variable, i.e., "school music" and "public school music." Antonyms are inappropriate. The closest antonym one could find is the apparently nonsensical term "non-music education."

Second, music education can be classified as a composite term derived

from two genera--music and education. It thus signifies a unique aspect of academia and a genus in itself.

Third, music education has characteristics which may be compared to any substantive area of knowledge which concerns itself with education of the young. However, because of the concern for nonverbal communication and aesthetic development, it compares most closely with art education.

Fourth, an operational analysis of music education reveals it to be a process or an operation. It is purposeful and occurs within the classroom setting. It is an interaction between two loci--the teacher and the student(s)--using a variety of material and activities.

The specification of the definition of music education, therefore, seems to be as follows:

> Music education is the practice of, the participation in, and the study of the process involved in the teaching and learning of music within the elementary and secondary school in order to fulfill three fundamental objectives, namely, the transmission of the cultural heritage in music, the acculturation of the individual to his musical environment as a participant, and the development of the individual's aesthetic sensitivity.

Elements In The Process of Music Education

The previous discussion has presented the conceptual framework of music education as being a process which occurs between two experiential loci and which is divisible into three subprocesses, or in operational analytical terms, stages. These three stages, in turn, exist within situations which constrain their operation. The following discussion will analyze these elements in terms of their function and characteristics in the overall process. An exhaustive analysis of each of these would lead to considerable verbiage and

such amplification does not seem appropriate here. Rather, the more gross considerations will be discussed for the purposes of clarifying the definition given earlier and for establishing concepts for use in determining relevancy of research.

Locus: The Music Teacher

The music teacher is the starting point of the teaching-learning process. It may be argued that students are a generating force in the process. However, the teacher is the determiner of whether or not a student's desire or interest will be fulfilled. The deliberations and decisions of a teacher are from him as a total person. He brings to the teaching-learning process a psychological set, behavior patterns, knowledges, information, characteristics, and a personality which are a result, in part at least, of previous experience and the environment of the moment. The manner in which his knowledges, characteristics, and personality affect behavior at any one time, determines, in large measure, the effectiveness of the teaching-learning situation. These are the major variables concerning the music teacher and represent the multifaceted function he plays. Some of the variables are abilities and characteristics developed prior to the teaching-learning process and comprise the basis for functioning, such as educational and musical background, knowledges, etc. Others are elements which directly influence the process, such as attitudes, values, interests, etc. Thus, the concern for these variables lies in their direct relationship to the teaching-learning process as functional elements. In more detail, some of the variables concerning the teacher functioning in the teacher-learning process may be identified as follows:

Personal Factors
- abilities (general)
- attitudes
- characteristics
- cognitive abilities

emotional traits
interests
motivations
musicality (perceptions)
personality
value systems

Social Factors
socioeconomic background
social class
professional behaviors
non-professional behaviors

Education
program of education
knowledges (general, music and education)
performance skills (musical)
teaching techniques

Professional Competencies

knowledges (music learning)
performance skills (musical)
qualifications
teaching techniques

Locus: The Student

The student is the focal point at the end of the teaching-learning process in music. His learnings are its product. Because it is the student who learns, what the student learns is dependent to some extent on what he is. What the student is determines, in large measure, not only what he can be taught at any one time, but how it can be taught to him. The nature of the student is therefore an intrinsic factor in music education. Like the teacher, he brings psychological set, behavior patterns, skills, knowledges, information, characteristics, and a personality which are a result, in part at least, of previous experience and the environment of the moment. Some of these variables may have developed prior to the formal teaching-learning situation. These same variables and others may be modified by the teaching-learning process. Too, the modification of one of these variables, for example an attitude, may in turn affect the teaching-learning process. Thus, as in the case

of the music teacher, these variables are directly related to the teaching-learning process as functional elements. Some of these variables may be indicated as follows:

Personal Factors
- abilities (general)
- attitudes
- characteristics
- cognitive abilities
- emotional traits
- interests
- motivations
- musicality (perceptions)
- personality
- values

Social Factors
- school activities
- non-school activities
- social status

Education
- school experiences (music and others)
- non-school experiences (music and others)

The Teaching-Learning Process

The teaching-learning process in music is a purposeful operation of considerable complexity. Some elements which comprise these complexities have been identified, i.e., music reading. Other elements continue to be vague, ill-defined and undifferentiated concepts, e.g., "general music." Therefore, it follows that although the teaching-learning process can be identified as an operation composed of several stages in various degrees of refinement, detailed operational analysis is not feasible at the present time.

It has been stated that music education has one primary or fundamental objective, i.e., "educating young people to the art of music." It also was stated that this primary objective could be divided into three sub-objectives--the transmission of the musical culture, the acculturation of the individual, and the development of aesthetic sensitivity. These are conceived as being

inclusive of the endeavors and purposes in the teaching-learning process in music education. They are not discrete, e.g., one may transmit that part of the musical culture found in the works of Brahms by teaching the skill of singing to create an aesthetic experience in nineteenth century literature through the medium of the "Liebeslieder Waltzes." In this example, the primary endeavor of transmitting an element of the culture requires a skill and may result in aesthetic development.

These broad sub-objectives for music education imply three sub-processes for the total teaching-learning process, each being an operation leading to an objective. These sub-processes, too, are not discrete and the variety of studies within them reflect their inter-relatedness. This inter-relatedness does not mean that specific studies cannot be treated discretely and cannot be categorized according to the central variable of study.

The following outline presents a categorical organization of the teaching-learning process in music education in terms of the three major sub-processes. Each sub-item may be better understood if prefixed with "The teaching and learning of ...":

Transmission of the culture

- Music History
- Music Literature
- Music Theory

Acculturation of the Individual

- Perceptual Skills
  - Music listening
  - Music reading
- Expressive Skills
  - Playing music
  - Singing
  - Composing music

Development of Aesthetic Sensitivity

- Musical Taste
- Musical Creativity

Constraining Elements

No process exists in a discrete state. It has a context of some kind which restricts it, limits its scope, and even affects its very nature. This context acts as a constraint in the sense that it affects direction, quality, and quantity. In applying these concepts to music education, a dynamic process, one finds several realistic constraints. These affect the teaching-learning process as being mutely involved, such as buildings and equipment; indirectly influential, such as a communities attitude toward the arts in education; or directly influential, such as philosophical assumptions, administrative structure and procedures, and curriculum. Some of these variable may be identified as follows;

Administration and Supervision
- administrative practice
- administrative organization
- faculty schedules
- supervision practices
- class scheduling

Curriculum
- types
- objectives

Community Influence
- traditions
- beliefs
- practices

Non-school Events
- contests and festivals

Philosophy of Education
- School
- Community

Facilities and Equipment

Materials of Instruction

Teaching Aids

It is realized that no set of rubrics used in analyzing or describing a field of study will be completely satisfactory to all concerned. Any list so

developed, in time, will be considered to be inadequate. The rubrics used in the above outline have these limitations. They can be accepted, however, in terms of a certain way of analyzing music education and the roles and needs of research in music education. They were developed for this purpose.

Research in Music Education

Various concepts abound in the music education profession as to what constitutes research, what topics for research are relevant to music education, and what is competent research. Decisions regarding such problems are mandatory before any attempt can be made to select relevant and competent research from a large body of professional literature. The discussion which follows sets forth the concepts and the rationale employed in dealing with these problems in this project.

Relevancy of Research

The relevancy of research to any given area of knowledge is determined primarily by the definition of that area and the specifications of its perimeters.

Music education has been defined as that process (teaching-learning) conducted in the schools through which musical knowledge is transmitted and perceived, and musical skills, understandings, and appreciations are developed, and how various factors (teacher, student, program, school, community) affect and influence these processes. Thus, research relevant to music education in terms of this definition would be concerned with these processes and the factors affecting them.

Specifically, relevant research would be related to the elements (and their sub-categories) in the process of music education as identified and delineated in this report. Also considered relevant was that research related

to the over-all development, analysis, and evaluation of the music education program. A summary, presented in outline form, is given below of those areas of research considered relevant to music education.

1. The Teacher. Relevant research would be that related to the (a) identification, development, appraisal, and status of the social background, education, knowledges, abilities, and characteristics of the teacher prior to involvement in the teaching-learning process, and (b) the influence of these factors (variables) on the teaching-learning process in the various areas of music education.

2. The Student. Relevant research is that related to (a) the identification, development, appraisal, and status of the social background, educational experiences, knowledges, abilities (perceptions) and characteristics of music students of various types and age levels, (b) the influence and effect of these factors (variables) on the learning process in music, and (c) the modification of these factors (variables) through the teaching-learning process. Studies utilizing as subjects students in foreign countries would not be considered relevant because of differences in cultural influence. It was believed that such influence, alone, would invalidate any comparison with students in this country.

3. The Teaching-Learning Process. Relevant research would be that related to (a) the objectives, knowledges, methods, techniques, and skills involved on the part of both the teacher and student in the various musical activities designed for the transmission of musical culture, acculturation of the student, and the development of aesthetic sensitivity, and (b) the role, evaluation, and influence of such factors (variables) on the effectiveness of the teaching-learning process in music.

4. Constraining Elements. Relevant research is considered to be that which is related to (a) the identification, development, status, and analysis of those factors which constrain the teaching-learning process and the program of music education in a physical sense (buildings, equipment, materials, etc.), in a psychological and sociological sense (community attitudes, etc.), and (b) the influence of these variables on the teaching-learning process and the program of music education.

5. The Music Education Program. Program refers to the totality of the activities in music education. Relevant research would be that related to a description, analysis, and evaluation of the program (curriculum and activities) in music education for purposes of identifying common elements, strengths, weaknesses, and recommending improvements in the program. Studies of these types do not refer directly to the teacher, the student, or the teaching-learning process as outlined above. Some studies in this category may relate to those identified under "constraining elements."

Research in the content of music (history, theory, composition), while considered relevant to music education by some persons, was not considered to be relevant in terms of the definition of music education used in this project. Research related to music education is not studies of music per se, biography, translations and interpretations of historically significant documents in music. Studies of these kinds are important to the content of a music teacher's information which is used during the teaching-learning process, but they are not studies related to the process. This is not to deny the value of research on content to the music teacher in the schools. It is most important to his fund of information. However, it does not provide him with information affecting the teaching-learning process.

Parenthetically, it may be asserted that what is taught in music education is a philosophical problem in the ultimate sense. No man knows what the next generation absolutely must know. No man knows what direction future music or education will take. Answers to these problems lie in the realm of beliefs and traditions and their expression is to be found in the literature and research stating the goals and aims of music education, or in the pragmatic activity of the music teacher in the schools.

Competency of Research

The term "research" as used in music education has covered a multitude of activities and report presentations. Research, however, is considered to denote a very specific type of activity which demands certain controls during the activity and certain requirements in the reporting of the work. If these controls and requirements are not followed, the work cannot be considered research. It may be scholarly activity or reporting, but not research.

The definition of research as given in Webster's New Collegiate Dictionary clearly differentiates the activity of research as compared with other scholarly endeavors.

> ...careful and diligent search; studious inquiry or examination; investigation or experimentation aimed at the discovery and interpretation of facts, or practical applications of such new or revised theories or laws.

The "careful and diligent search" as specified in this definition requires that the search be confined or aimed at some definite, definable problem. In other words, a specific problem must be identified before it is possible to conduct a "careful and diligent search." The identification of a specific problem on which the search is controlled is an accepted requirement of all research activity.[4,5,6,7,8] The specified problem serves as the control or guide in the collection of data and in the analysis and interpretation which follow.[9] This is true for all types of research; from that

known as "philosophical inquiry" to experimental study.

A research report thus differs from other types of scholarly reporting in that it defines and specifies at the onset the specific problem to be dealt with and solved. The statement of a specific problem in a report is one of the primary criteria in identifying research from other types of reporting.

The "studious inquiry or examination" required in the definition would demand that a plan of action be specified and followed--an organized, methodological attack on the problem under study. Research activity involves a formal, systematic, method of analysis that leads to a solution of the stated problem. It is a logical and objective process, which verifies the data obtained and the procedures employed. These requirements are applicable to all types of research and are commonly accepted concepts in any definition or description of research.[10,11,12,13,14]

The research report thus contains, in addition to the statement of a definite problem, an accurate description of the source of information, the methods employed, and the evidence to support the conclusions reached.[15] This methodological approach also differentiates the research report from other types of scholarly writing.

The latter statements in the definition, "revisions of accepted theories or laws in the light of new facts, or practical applications of such new or revised theories or laws," would seem to require that the results obtained be generalizable. This also is an accepted concept in an understanding of the meaning of research. Monroe and Engelhart[16] emphasize this in the following statement:

> An essential requirement is that the data collected afford some basis for generalization and that the interpretation of the data be continued until a tentative generalization is reached. As used here a generalization designates a statement of conditions, trends, or relationships which may be utilized as a basis of thinking or action in situations other than the particular one studied.

The representativeness and the size of the sample and the representativeness of the data would be important considerations in certain types of studies, for example, in determining generalizability.[17] In historical studies, the records of past events would need to be collected and interpreted for the purpose of arriving at generalizations related to current problems.[18] Historical studies without such purposes, only the recording of past events, could not be considered competent research.

Research studies in which the findings had little value outside the local situation in which they were studied also could not be considered competent research. Thus, those studies referred to as "service studies" and "investigations" by Guba,[19] or those referred to as "institutional" studies or "action research," would not be considered competent if their intent was only the solution of a local problem. Such studies generally report on problems peculiar to a specific school with no intent in purpose, design, controls, or outcomes, to be useful to the profession as a whole. They undoubtedly have great value for the particular school. They may even provide examples of designs which would be useful to other schools with similar problems, and they may be generative in formulating ideas and research problems. But, their contribution to the profession as a whole is very slight.

From the above definition, and the interpretation and refinement of that definition, it is obvious that the usual type of "library research report" assigned in the high school and college fails to meet the requirements of true research. Such reports, while citing sources and justifying concepts with quotations from accepted authorities, are more correctly labeled essays or polemics. They cannot be considered research in that the writer was not bound by the same strict rules or conditions as the research scholar. Such essays or polemics usually present a mere collection of information, or a discussion of some subject expressing the writer's opinion, interpretation, or point of

view.

Reports not clearly identifying a specific problem to be studied, presenting an organized plan whereby the work was accomplished, or providing a basis for generalization, cannot truly be considered research reports. Similarly, essays, polemics, and such materials as handbooks, lists of materials, plans or projections for programs and activities, musical compositions, and like materials, while sometimes accepted as research, could not be considered to meet the basic requirements of research. They may provide much useful and needed information and they may generate numerous ideas for research. But, they cannot be considered competent research in terms of the concepts presented here.

The evaluation of a research report for competency demands that the reader make value judgments on numerous items related to each of the general concepts of an acceptable report as outlined above. While no universally accepted list of criteria exists (it would probably be endless), certain basic criteria are commonly employed in making decisions on the competancy of various types of reports. Some of these basic criteria, and those used in this project, are given below in question form. They were adapted from a list proposed by Van Dalen.[20]

1. <u>The Problem</u>.

   Was the logic of the problem analysis sound?
   Were the hypotheses in agreement with all known facts and compatible with well-tested theories?
   Were the hypotheses testable?
   Were the purposes possible of attainment?

2. <u>Method of Attack</u>.

   a. General considerations:

      Was an adequate detailed explaination of the method, techniques, and tools used to test the deduced consequences given?

Were the procedures the most appropriate for testing the particular consequences?
Were the assumptions that underlie the use of the data gathering devices fully met in this study?
Would the techniques, methods, and tools produce relevant, reliable, valid, and sufficently refined data to justify inferences drawn from them?
Did the report accurately describe where and when the data were gathered?
Did it describe precisely the number and kinds of subjects, objects, and materials used in the investigation?

b. Descriptive studies:

Was the design adequate in scope, depth, and precision in order to obtain the specific data required?
Had every possible precaution been taken to establish observational conditions, frame questions, design observational schedules, record data, and check the reliability of witnesses and source materials so as to avoid collecting data that were faulty?
Were the specific items the observer was to note when describing a condition, event, or process clearly identified, and a uniform method provided for recording precise information?
Were the categories for classifying data unambiguous, appropriate, and capable of bringing out likenesses, differences, or relationships?
Does the study reflect a superficial analysis of surface conditions, or does it probe into interrelationships or causal relationships?

c. Historical studies:

Was most of the report based upon primary sources?
If some secondary sources were used, did they contribute to the less significant data rather than the crucial evidence for the solution of the problem?
Were the source materials examined critically for authenticity and credibility?
Were words and statements from earlier documents correctly interpreted?

d. Experimental studies:

Was the possibility of hidden factors, other than the experimental variable, considered as explanation of the obtained data?
Did the investigator randomize the variables that he did not want to influence the results?
Did the investigator consider the possibility of unconscious signaling or of previous practice influencing the results?

Did the investigator take into account all significant characteristics necessary to obtain equilivance of groups?
Was the law of the single variable obeyed in traditional designs?
Were all assumptions underlying the use of statistical techniques met in the design?
Were their any conditions biasing the experimenter or the subjects of the experimenter?

e. Sampling:

Was the sample sufficiently representative of the population to permit the investigator to generalize his findings?
Was the sample adequate in kind and number?
Were their any conditions biasing the selection of the sample?
Was the control group as representative as the experimental group?
Were the techniques of pairing or matching the subjects valid?
Did the sample satisfy the assumptions underlying the use of the statistical procedures?

f. Tests and measures:

Were the tests employed appropriate for the abilities of the subjects, time limits, sex, social class, etc.?
Were qualified judges chosen to rate various phenomena?
Were there any items or factors in the tests or measures that might limit the extent or type of the subject's response?
Were the materials pre-tested before use?

g. Questionnaires and interviews:

Was each question sharply delineated to elicit the specific responses required as data?
Did the questions adequately cover the decisive features of the needed data?
Were the questions colored by personal or sponsorship bias, loaded in one direction, or asked at the improper time?
Did each question afford a sufficient number of alternative answers to permit the respondent to express himself properly and accurately?
Were stereotyped, prestige-carrying, or superlative words and phrases used that bias the response?
Were multiple-choice responses randomly arranged to reduce the likelihood of systematic errors?
Were the materials pre-tested before use?

3. Analysis of Data.

Was the analysis objectively stated and free from mere opinions and personal prejudices?
Were broad generalizations made without sufficient evidence to support them?

4. Conclusions.

Were the conclusions justified by the data gathered?
Were the conclusions qualified to show the limits within which they apply?

The above criteria were some of those used in making competency judgments of the research reviewed in this project. If there was any doubt of the adequacy of the information contained in a report in meeting any of these criteria and those discussed previously, the study was not considered to be competent.

References

1. Upton, Albert. Design For Thinking. Stanford, California: Stanford University Press, 1961.

2. Mourant, John A. Formal Logic: An Introductory Textbook. New York: The MacMillan Co., 1963.

3. Brodbeck, May. "Logic and Scientific Method in Research on Teaching." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand-McNally Co., 1963, pp. 44-93.

4. Hillway, Tyrus. Introduction To Research. Boston: Houghton Mifflin Co., 1956, pp. 235-245.

5. Best, John W. Research In Education. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961, pp. 6-8.

6. Monroe, Walter S. and Max D. Engelhart. The Scientific Study of Educational Problems. New York: The MacMillan Co., pp. 9, 24, 444.

7. Travers, Robert M. W. An Introduction to Educational Research. New York: The MacMillan Co., 1961, pp. 73-79.

8. Van Dalen, Deobold B. Understanding Educational Research. New York: McGraw-Hill Book Co., 1962, pp. 108-117.

9. Monroe and Engelhart, Op. Cit., p. 444.

10. Hillway, Op. Cit., p. 235.

11. Best, Op. Cit., pp. 6-8.

12. Monroe and Engelhart, Op. Cit., pp. 443-445.

13. Travers, Op. Cit., pp. 76-81.

14. Van Dalen, Op. Cit., pp. 108-339.

15. Hillway, Op. Cit., p. 235.

16. Monroe and Engelhart, Op. Cit., p. 444.

17. Ibid., p. 445.

18. Travers, Op. Cit., p. 62.

19. Guba, Egon G. "Experiments, Studies, Surveys, and Investigations." In Culbertson, Jack A. and Stephen P. Hencley (Eds.), Educational Research: New Perspectives. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1963, pp. 237-248.

20. Van Dalen, Op. Cit., pp. 366-376.

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CHAPTER III

PROCEDURES

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PROCEDURES

The procedures employed in the process of identifying and synthesizing competent research studies in music education (in terms of the definition stated in CHAPTER II), and providing abstracts and microfilms of these studies for storage in the ERIC retrieval system, are given in sequence below.

1. A list of titles of published and unpublished documents in music education was compiled.
2. The relevance of these documents to the project definition of music education according to their titles was estimated in a preliminary screening.
3. PERT* techniques were applied to clarify procedures and time allotments in the operational plan of the project.
4. A priority system for the procurement of apparently relevant documents from various sources of supply was devised.
5. Available studies were evaluated for their relevance to the project definition and for their competence as research.
6. Each study was categorized according to its content and placed in the categorical system which evolved from the project definition of music education.
7. Competent studies were microfilmed in their entirety for storage in ERIC.

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* Program Evaluation and Review Techniques. PERT is basically a military management tool. It is a systematic method of laying out a program plan, checking the logic of the plan, and keeping account of its development.

8. An abstract of each competent study was written and index terms devised for use in the ERIC retrieval system.

9. The findings in each category were synthesized.

The material contained in the following pages gives the specific operations and concepts employed in each of these procedures.

Compilation of a List of Titles

The objective for compiling a list of titles in music education was to identify titles of apparent research reports completed in the United States during the period 1930-1962. This required the examination of several kinds of published literature for titles and the contacting of a variety of sources for unpublished or rare documents.

Published Research

The simpler and more obvious process was immediately instituted by sending project personnel to published compilations which would yield titles of apparent research in music education. These were Dissertation Abstracts, Psychological Abstracts, Sociological Abstracts, and the bibliographies in music education compiled and edited by Small and Larson. As lists were developed from these sources, references to other potential sources were found. As a result, whole sets of journals were searched such as the Journal of the Acoustical Society of America, and the Journal of Speech and Hearing Disorders. Complete indexes were searched such as the Education Index and the Music Index. All of the national journals in music education were searched as well as other sources in music such as the Musical Quarterly and the Journal of the American Musicological Society. The bibliography of every study found to be relevant and competent research also was searched for titles not listed in the project catalogue. This became a process of increasing magnitude which went beyond the most extreme anticipations of the investigators.

Undoubtedly, a complete list of relevant titles could never be guaranteed. However, the examination of 708 sources for titles gives some assurance that probably most of the research relevant to music education has been identified. The list of the 708 bibliographic sources used is presented in Appendix E.

Unpublished Research

The second and concurrent searching process had for its objective a complete list of titles of unpublished research (theses, dissertations, faculty research) for the period 1930-1962. This was a complex process which included: (1) compiling a directory of institutions of higher education offering graduate studies in music education, (2) obtaining titles of studies in music education from these institutions, and (3) listing these titles in the project catalogue.

The directory for the initial phase of this aspect of the project was begun with the listing of the ninety-three institutions included in the two Larson bibliographies.[1,2] Since each of these volumes differs slightly as to the institutions which contributed to them, three different groups of institutions had to be contacted: (1) institutions included in Larson's first volume--1932-1948, (2) institutions included in Larson's second volume--1949-1956, and (3) institutions included in both Larson volumes.

It was known that institutions other than those which contributed to the Larson compilations had research titles to report. A total of forty-seven names of institutions was added to the directory by the investigators from their personal knowledge. The question arose as to what other institutions in the United States should be contacted for research titles. The answer which seemed most valid was those institutions offering graduate study since these institutions would be the most likely source of research reports. It was decided that a survey would be necessary before an accurate list of insti-

tutions offering graduate study in music education could be compiled.

For this survey, the project directory was checked against and supplemented from the listings found in The Education Directory of the United States Office of Education: Part 3, Higher Education, 1962-1963;[3] the United States Office of Education publication, Enrollment for Advanced Degrees, First Term 1962-63: Final Report;[4] the United States Office of Education document, Earned Degrees Conferred: Bachelor and Higher Degrees for 1963;[5] The College Blue Book;[6] American Colleges and Universities;[7] and the National Association of Schools of Music publication, List of Members.[8] The resultant directory included the names of 361 additional institutions whose status as offering music education graduate studies was uncertain or unknown.

The survey was conducted by means of a memorandum (see Exhibit 1 in Appendix G) which was sent to each of the 361 institutions inquiring whether graduate degrees in music education were offered. There were 71 institutions replying positively, 290 replying negatively, with 6 institutions failing to reply. Adding the names of the 71 institutions replying positively to those which were known to offer graduate degrees in music education resulted in a total of 211 institutions in the United States which offered graduate programs in music education. These 211 institutions were considered to be the potential sources for titles of completed student and faculty research.

Titles of research studies were obtained by sending a letter containing information and instructions to the 211 institutions (see Exhibit 2 in Appendix G). Included in the letter were three forms--one each for reporting lists of published faculty research, unpublished faculty research, and graduate student research (see Exhibits 3,4, and 5 in Appendix G). For those institutions included in the Larson bibliographies, two particular letters were developed which would obviate the duplication of the Larson listings (see Exhibits 6 and 7

in Appendix G). In general, these institutions were requested to supply the project with lists of research for the years 1930-1962 which were not included in the Larson bibliographies. The same three forms for reporting faculty and student research were included with these letters of instruction. The entire mailing of this material occurred in November, 1963. The last return was received one year and a half later, in May, 1965, after several follow-up letters were sent. A total of 171 institutions returned the completed forms with 139 supplying titles of research studies. Cooperation was not obtained from forty institutions. A list of 171 cooperating institutions is given in Appendix F.

The Catalogue

The catalogue of titles resulting from the survey and the examination of published sources was fifteen months in development, with a small amount of activity continuing through the end of the abstracting process as the bibliographies of competent research were examined. The catalogue included all of the titles in published bibliographies in music education, all titles supplied by the surveyed institutions, and the titles found in other published literature. The project personnel assigned to searching the literature were instructed to list all titles in the assigned sources relating to the needs of the teacher and music teaching for the years 1930-1962. They were not to make value judgments on the relevancy of titles except in those cases where titles clearly related to some other area of study. Because there were several persons working at the same time, and because there was a time-lag between the depositing of cards in the project office, the alphabetizing of the cards, and making typed copies, a certain amount of duplication occurred. Too, published errors in titles and authors names caused some duplication and confusion.

The problem of the gross relevancy of a title was the bete noire of the bibliographers. There was the problem of information the teacher needs to know

to function in the teaching-learning process as differentiated from research related to the teaching-learning process. Thus, some studies in the area of speech and hearing or architectural acoustics were listed. As the work of the project evolved, many of these titles were eliminated as being too remote to music education as it was finally defined (see CHAPTER II of this report). Almost all of this kind of title listing occurred only in the early weeks of the project as concepts were being taught to the bibliographers and refined by the principal investigators. The variety of information a bibliographer must have is formidable when he attempts to interpret gross relevancy of titles while looking through such sources as Psychological Abstracts and Sociological Abstracts. This is compounded for persons who are not primarily specialists in these fields. Whenever possible, a bibliographer was assigned to sources whose semantics were familiar to him, but it was obvious that this variable in the searching process created severe difficulties at times. Too, personnel doing the listing was partly student and therefore, changing. Adhering to a reasonable latitude and limitation as to what was relevant in gross terms demanded constant consideration and counseling.

The catalogue developed in the project contained a grand total of 11,810 titles. Of this number, 2660 were found not to be related to music education. The 9150 titles* thus remaining were considered to constitute all of the possible research related to music education which was completed during the years 1930-1962.

Of this total number (9150) of possible research studies related to music

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* The original estimate of the number of studies completed during the years 1930-1962 (as given in the project proposal) was indicated, after a rough sampling, to be approximately 4000-4500 studies. This estimate amounted to approximately one-half of the titles in this body of literature.

education, 119 titles were found not to be available, and 1818 studies were selected in terms of a priority system for review and abstracting. The catalogue now contains, in addition to the 1818 studies abstracted and/or reviewed and the 119 not available, 3946 titles believed to be relevant to music education as defined, and 3267 titles possibly related to music education in terms of information the music teacher needs to know to function in the teaching-learning situation. CHAPTER IV of this report presents an analysis of the data relating to the number and kinds of reports listed in the catalogue. A categorical breakdown of the number of titles listed but not reviewed also is given in Appendix C.

Preliminary Screening

As bibliography cards were deposited in the project office, the titles were screened by the project directors for a preliminary allocation to relevant and non-relevant files. This decision about a title was based on an estimate of the meaning intended by the title. Only those titles which suggested contributions to the teaching of music were considered relevant at this time. This was the same rough screening system utilized by Small in 1944.[9] The purposes of this preliminary screening in the early stages of the project were as follows:

1. The utilization of extant titles as a device for refining concepts of what was relevant to music education from the point of view of logic.
2. The utilization of extant titles as a device for refining concepts of what was relevant to music education as it is practiced.
3. The preliminary establishment of a priority system by which a categorical system of relevant topics could be devised.
4. The establishment of a priority basis for making typed copies of bibliography cards.

5. The establishment of a priority basis for ordering documents and microfilms.

Many of the decisions concerning the relevancy of titles were revised at a later date after the definition of music education had been refined and when the documents were examined. Further discussion on procedures pertaining to relevancy is given in the section on Relevance on a following page.

Application of PERT Techniques

During the tenth through the fifteenth month of the project, the Director of USOE Project E-016, "Applicability of Program Evaluation and Review Techniques (PERT) to Educational Research and Development Projects," requested the privilege of using this project for an exercise. This was the application of PERT techniques to an "integrative" activity. The entire sequence of events in Project E-016 was placed in a PERT flow chart, showing where the project had been, its status at that time, future events, and the project's time sequence. Figure 1 shows the work breakdown structure used in the project. A summary of the workflow network is given in Fugure 2.

The application of the PERT technique to the project resulted in several benefits. The numerous elements were identified in meticulous detail on small charts and then entered in a major flow chart. This process provided a far more realistic understanding of the number of events, the complexity of constraints between the events, and the sequence of events involved in the project. With this information, procedures were more clearly delineated and concepts of timing became more realistic. In some instances, project procedures were revised.

The value of the PERT technique to a project, other than the necessity of logically ordering the project events in a time sequence, is that of predicting task completion dates. To do the latter, assumptions are made as to

2

estimated time involved in the completion of each task. If unknown, or unforeseen variables arise which cannot be controlled, the predicted completion dates will be incorrect. This proved true with this project. The PERT analysis, in terms of known variables and seemingly valid assumptions, justified the time alloted to the completion of the project. Unforeseen technical difficulties, however, as well as larger number of titles than anticipated, caused a completion delay of several months. These difficulties are discussed in the following section.

Unresolved Difficulties

When this project was being planned, time estimates for abstracting were obtained from several sources which had been or were in the process of abstracting research reports. These estimates ranged from fifteen minutes to sixty minutes per document. There seem to be, however, three levels or sorts of abstracts and each has its own time requirements. These are (1) descriptive abstracts, (2) substantive abstracts, and (3) substantive abstracts composed after the research competency of a study has been determined. This project was concerned with the last of these.

No time estimates were found which could be used as a precedent for projecting the quantity of time each identified task would take, particularly the process of competency evaluation.

At the time that the PERT technique was applied, only a few studies had been abstracted and evaluated. The abstractor-evaluators working in the project found that their work was averaging about two hours per document. When other responsibilities were added to the abstracting-evaluation responsibilities, such as checking the inevitable errors made in the listing process and assisting in the physical processing of documents, an average estimate of three hours per document would have been more realistic. It should be recoun-

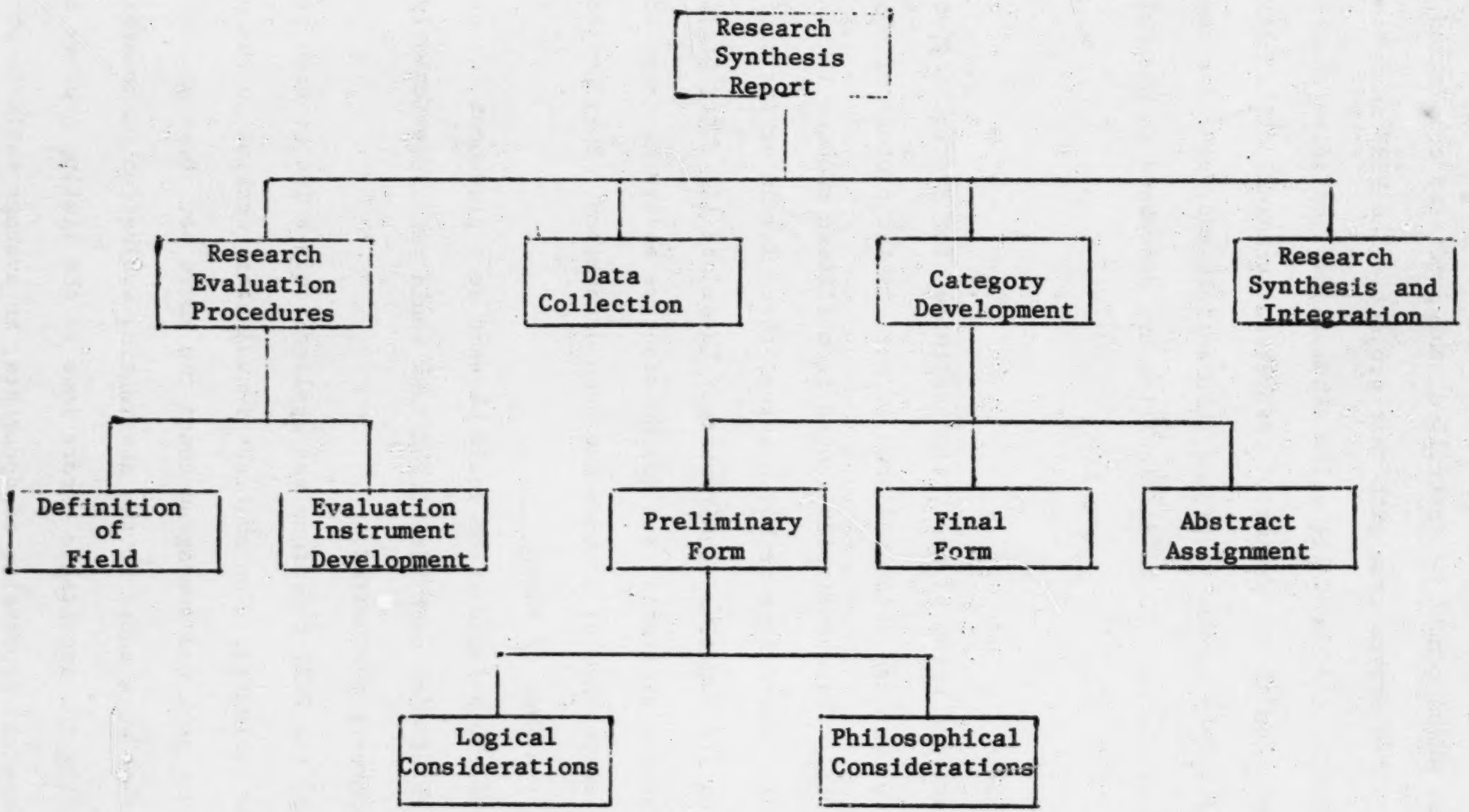
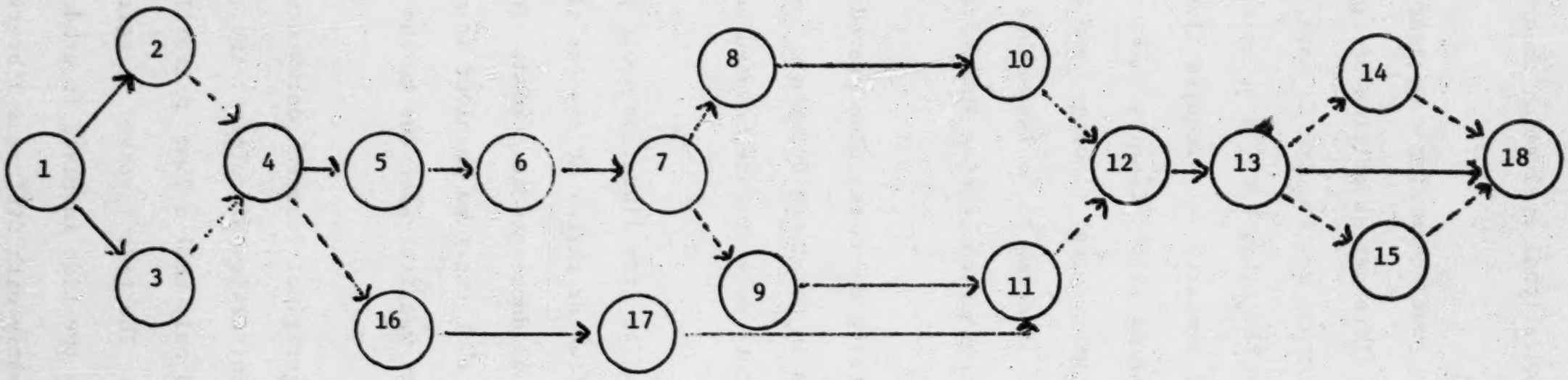


Figure 1. Work Breakdown Structure Used in the Project



Event Identification

1. Project Start
2. Complete Relevancy Definition
3. Complete Research Definition
4. Start Evaluation Instrument
5. Complete Research Evaluation Review
6. Complete Abstract and Evaluation Form
7. Complete Initial Bibliography List
8. Start Procurement
9. Start Abstracting
10. Complete Procurement
11. Complete Abstracting
12. Start Abstract Assignment
13. Start Synthesis and Integration
14. Start Recommendations for Future Research
15. Start Annotated Bibliography
16. Start Preliminary Category Development
17. Start Final Category Development
18. Project Complete

Figure 2. Summary Work Flow Network for Project

ted here that each document went through two additional evaluation checks after the original abstract was composed.

Perhaps the most elusive time estimate is that concerning competency evaluation. Different kinds of documents require different quantities of time. A collection of articles in one series of a journal may require no more than an average of fifteen minutes per article. On the other hand, a voluminous survey, of which there are many in educational research, may require five or six hours of concentrated effort. One of the most time consuming tasks is the process of double checking a study's problem, procedures, findings, and conclusions on a microfilm. At the present time, it seems to be impossible to determine an average time for making value judgments concerning intricate research designs.

The time estimates made in terms of obtaining documents also proved to be grossly inaccurate. Technical difficulties in obtaining documents for review and microfilming, of which the investigators were unaware, caused numerous delays and much frustration.

It was learned, for instance, that many university libraries would permit the loan of only a small number of documents (two or three) at any one time. Only after these were returned, would additional documents be loaned. This policy slowed down the procurement process in that the time involved in processing each loan order and the time in transit was increased due to the necessity of numerous orders.

Many libraries also would no longer loan original research documents. Some libraries referred the investigators to University Microfilms, Inc., for a copy of the desired document. Others, would only sell a 35mm microfilm or a xerox copy produced in their own facilities. The time involved in correspondence obtaining such information as well as the time involved in producing a copy of the document, if ordered, varied greatly with different libraries.

There was no way of predicting the time involved in this procurement process.

When libraries would make available to the project only 35mm microfilm (either on loan or purchased), the 16mm microfilms for the ERIC Project had to be transformed first to a xerox copy and the 16mm film made from this copy. These processes added many hours to the estimated time table.

These two factors, that of the time variable in determining competence and abstracting a research study, and that of the technical difficulties encountered in obtaining documents for review and microfilming, accounted in the main for the inaccurate time predictions resulting from the PERT analysis. These problems are recounted here to alert other researchers who might need numerous documents from libraries for similar projects.

Other problems relating to document procurement are presented in the section which follows.

Procurement of Documents

The process of document procurement was anticipated as a simple task, namely, the use of the local university libraries, the purchase of microfilms, and the use of interlibrary loan services. This proved to be an underestimation of the task's complexity. A greater variety of documents in a greater variety of holding situations was found. Specifically, the following sources provided documents and information about the location of documents for use in the project: University Microfilms, Inc., University Libraries, Public Libraries, State Departments of Education, City Departments of Education, Authors, Foundations, and Music Business Firms.

The complexity of the holding status of documents required several techniques in their procurement from the sources listed previously. The initial endeavor was to seek the document locally. If the document was on The Ohio State University campus in either the libraries or the personal library of a

staff member, it was screened for relevance and for its status as a research report. If it seemed to be a research report, it was removed to the premises of the project offices for evaluation and abstracting. As soon as the document was known not to be available locally, it was ordered through interlibrary loan services, or obtained from the appropriate source directly. If a document was listed as unpublished faculty research, a letter was sent to the author (see Exhibit 8, Appendix G). The letter requested a copy of the original documents under his authorship. If a document was published by a business firm or another kind of office, such as the Pittsburg Public Schools Office, an appropriate letter requesting the document was sent.

The original intention in the early phases of the project was to obtain documents according to temporarily formed categories of information. This was never realized. The complexities of the procedures in interlibrary loan services made this plan impossible. The influence of these procedures had some effect on the efficiency of the operations carried on in the project. The complete lack of standardization of interlibrary loan procedures, and even seemingly illogical and arbitrary rules which govern this activity, created far more difficulties for the project than any other procedural matter. Some documents could not be obtained through interlibrary loan services. Some libraries made the microfilming of documents for the ERIC project nearly impossible.

All of this confusion in procurement made a discrete sequence of ordering, abstracting, and returning documents by category of information impossible. Documents continued to "trickle" into the project office for initial reviewing as late as October 15, 1965. Those which were obtained by special arrangement for microfilming in the ERIC project and required 16mm film, were still being handled in the project office on December 15, 1965. It should be made clear, however, that certain libraries which bore the major burden of this procedure

were most helpful and reasonable in their desire to serve while protecting their holdings.

Priority System

The rationale for the procurement of documents varied according to the evolution of the project. In the early stages, a quantity of doctoral dissertations on microfilm was obtained. There were several reasons for this block order. Dissertations were presumed to be sophisticated research and therefore, these documents would have to be examined. Materials were needed for testing the adequacy of the abstract form which was developed, and for testing the concepts of relevance and competence. Also, a backlog of documents was needed for those periods when a lull would occur in the flow of documents from the various sources of supply.

After the initial group of microfilms was obtained, a rationale and a system for procurement procedures was instituted. An assessment of the project's status near the end of the compilation process indicated that it would be impossible to review all of the documents which might be research relevant to music education. As will be indicated under the discussion of the problems of relevance and competence, only the contents of a document is an adequate basis for making value judgments of these kinds. Therefore, all documents apparently relevant to the project's definition of music education were to be seen, but the quantity of these documents coupled with the problems of procurement and the predetermined termination date (in terms of the original estimates), forced the project directors to establish a priority system for procurement.

The priority system for procurement was based on the assumption that the quantity of education of a document's author would be a factor in the documents quality as a probable research report. Because most published documents were written by faculty members in higher education, published documents were

considered to be such documents. On this basis, three types of documents were given top priority for immediate procurement: (1) published documents, (2) unpublished faculty documents, and (3) doctoral dissertations and projects.

Masters' theses, which comprise approximately two-thirds of the total apparent research literature in music education, were given the lowest procurement priority because of the low level of sophistication believed to be typical of this type of document. Some 212 masters' theses were reviewed, however, because of their availability and their suspected competence as research reports. Of this number, 40 theses were found to be relevant and competent studies. It is doubted that this ratio would obtain in the total number of theses listed since those reviewed were a selected sample.

With the exception of 28 published reports whose titles were obtained too late for procurement and review in the project, and four faculty research papers and 88 doctoral project reports for which review was postponed because the titles indicated non-research (proposed courses, handbooks, lists of music, etc.), all documents of these types listed as produced during the years 1930-1962 were reviewed in the project. CHAPTER IV presents specific data relative to the number and types of documents reviewed in the project.

Determination of Relevance

The original intention of the project as it was stated in Appendix A of the project's contract, was to determine the relevancy of a study in terms of a definition for music education as follows:

> Music Education is defined here as the teaching of music in the Classroom situation as is generally found in the public schools. The research related to the transmission of musical knowledge and the development of musical skills in this framework will be the basic concern of the project.

The relevance of a title to that definition was to be determined by the variables in the teaching process as found in the writing of Gage,[10] namely:

central, relevant, and site variables.

> A central variable in research on teaching is one referring to a behavior or characteristic of teachers....There are three categories of central variables: (1) teaching methods, (2) instruments and media of teaching, and (3) the teacher's personality and characteristics....
>
> Relevant variables are those that refer to antecedents, consequents, or concurrents of our "central" variables....Two loci in which relevant variables cluster are (1) social interaction in the classroom, and (2) the social background of teaching...
>
> Some variables are typically held constant and are used to characterize the "site" or situation in which other variables are studied. The categories of site variables considered here are (1) grade level, and (2) subject matter...

As the project progressed, it became evident that the variables of Gage were too restrictive to cover the concepts and research related to music education. Difficulty also was encountered in accepting Gage's notion of the central variable in teaching. For example, the first of Gage's relevant variables, "social interaction in the classroom," could be considered the central variable if one assumes that the student is more than a receptacle, i.e., a dynamic factor in the educational process, and that some kind of change occurs which goes beyond the teaching process. Learning also is taking place and it effects changes in the teaching process. At least this is an accepted concept in education in the arts. Thus, after much thought, the investigators were led to reject the specific suggestions of Gage and to consider a more inclusive definition of music education--one which would give greater emphasis to the teaching-learning process. A refined definition would make possible the determination of the relevancy of any study.

Another factor in the inadequacy of the original definition was the concept of objectives for music education. Two objectives had been included -- the transmission of musical knowledge and the development of musical skills. As the project evolved, it became apparent that these were statements of broader concepts and that a third and equally important concept should be

added. Concerning the first objective, it was accepted that knowledge is culturally determined. In fact, knowledge may be considered a symbolic organization of a cultural heritage for the most part. Few men can claim to have created new knowledge. Therefore, the first objective in music education, a process, was revised to be "the transmission of the (musical) culture." The second objective was a more subtle problem. In brief, skills are the personal techniques by which an individual participates in his culture. To gain the skills of his culture is for him to become acculturated, to become capable of dynamic, willful participation. Therefore, the second objective was restated to be "the acculturation of the individual." The third objective, or the newly added objective, "the development of aesthetic sensitivity," is perhaps the only unique and fundamental reason for the arts to exist in the schools. There is only one source for the teaching of the gentility in beauty and that is through the exposure to beauty. In formal education, the major vehicle for accomplishing this is the arts. This process may be called education toward aesthetic sensitivity.

These two considerations, the revision of the objectives and the new term "teaching-learning process," added broader and clearer dimensions to the project. It was necessary to revise the approach to a synthesis of research information relating to music education. Some new kind of organization had to be found. Three attempts were made to develop a taxonomy of research in music education which would include all of its facets in terms of practice and the implicit demands of the objectives. There was a great deal of difficulty in finding terms appropriate to classes of information as well as difficulty in finding classes appropriate to all of the information. Also, the concept "relating to" became a difficulty. Eventually, it was realized that two types of research were implied, that which was "in" music education and that which

was "related to" music education. Complex paradigms were attempted as an aid to thinking, but were abandoned. After considerable deliberation on these problems, it was decided that only an ad hoc categorical system was possible at the time.

A categorical system was begun on this basis. This procedure was used until the numerous problems arising from the lack of an overall rationale forced another reassessment. It became evident that although music education had been defined as the teaching-learning process, a delimitation of what was not music education had not been established. As titles were screened for relevance, the vague areas of relevance increased with the varieties of titles. A point at issue was the volume of literature about the student and the teacher as elements in the school music classroom. Too, a term such as "teaching-learning process" indicates an interactive process inclusive of elements of varied relevancy. Again, the question of the definition's adequacy was raised.

It was now obvious that a complete and exhaustive definitional analysis of the term "music education" was essential. Several questions forced the investigators to this position. What is involved in the teaching-learning process? How is music education differentiated fundamentally from any other endeavor in music? Music teachers teach music history, theory, literature, performance, etc.; therefore, is there a peculiar concern which may be termed music education? If there is such a differentiating element, what research would be related to it?

As a first step toward an exhaustive analysis of the term "music education," an examination of the literature for a new definition of music education which would be helpful only verified the belief that all published definitions were semantic catch-alls without logical base. It was then recognized that a complete justification for the intuited explanation of music education as the teaching-learning process in music would have to become a basic contribution

of the project. Further, no reliable progress could be assured until a major attempt at an exhaustive analysis was made.

The investigators proceeded to examine the literature in logic and semantics. A careful, detailed examination of the term "music education" ensued. This resulted in a paper entitled "Toward A Definition of Music Education" which became the basis for the material presented in CHAPTER II of this report. The definition as developed is here restated:

> Music education is the practice of, the participation in, and the study of the process involved in the teaching and learning of music within the elementary and secondary school in order to fulfill three fundamental objectives, namely, the transmission of the cultural heritage in music, the acculturation of the individual to his musical environment as a participant, and the development of the individual's aesthetic sensitivity.

The detailed examination of the term "music education," and the activities contained in music education, made possible the identification of the elements in the process of music education. Relevant research was then indicated to be that which was related to these elements as identified and delineated in the discussion. In summary, relevant research in the process of music education was related to the major variables of The Teacher, The Student, The Teaching-Learning Process, Constraining Elements, and The Music Education Program. (See CHAPTER II for a complete explanation and description.) It was on the basis of the definition and a breakdown of the elements that the relevancy of any study to music education was made. While the problem of relevance was not completely solved by the clarification and refinement of the definition, the number of questionable allocations was reduced to a minimum.

The varieties of decisions concerning relevance were numerous. Basically, there were two levels of decisions--by title and by content. Because of the volume of bibliography cards and the time element and difficulty in obtaining documents, it was decided that only those titles which indicated specifically

a study of music in the public schools, the pupil functioning in the schools, and the teacher functioning in the schools would be considered relevant. A large number of studies were examined in spite of the title not meeting these criteria because they were published in the known professional journals and books in the field of music education.

Determining the relevance of a document by its content proved to be the only satisfactory procedure. A few documents were deliberately obtained to verify the misleading character of titles. Almost no documents can be fully evaluated for relevance or competence by title alone. It was necessary to assume that all documents had to be seen before their relevance was finally established.

Determination of Competence

The objective for the evaluative process was the determination of a document's status as a report of competently performed research. Contrarily, the objective was to eliminate from consideration all polemics and reports of inadequately performed research. Positively, the endeavor was to discover validated information about the teaching-learning process in school music. Negatively, the endeavor was to eliminate invalid sources of information about the teaching-learning process, thereby separating opinion from fact.

The procedures for determining competence involved reviewing and abstracting the contents of the obtained documents for adequacy and logical consistency.

An Abstract Form was designed to obtain all essential information from a document. This included bibliographic information, a statement of the problem or purpose, the procedures used, the findings obtained, and the conclusions reached. It also contained a checklist by which the competence of the methodology could be evaluated and space for the abstractor's subjective reaction to the document. Each document was analyzed according to this outline and the

criteria for competence presented in CHAPTER II of this report. A copy of the Abstract Form is included in Appendix G (Exhibit 9). In addition to the Abstract Form, an Abstractor's Guidebook also was prepared for use in the project (see Exhibit 10, Appendix G).

Criteria for competence which supplemented those in the Abstract Form and those presented in CHAPTER II were found in Edwards,[11,12] Ferguson,[13,14] Campbell and Stanley,[15] Tatsuoka and Tiedeman,[16] Siegel,[17] and Culbertson and Hencley.[18] In summary, a reported study had to follow logically from the stated problem or purpose, to appropriate procedures, and then to logical findings.

When an abstractor had completed his evaluation, it was sent to another abstractor who checked the original abstract and evaluation of competence. The second level abstractor also composed a summary abstract. When the summary abstract was completed, both forms of the abstract and the original document were forwarded to the project directors for final evaluation.

Problem Areas

Several problem areas developed in the process of evaluation. There was considerable debate concerning the efficiency of examining documents purported by title to be projective studies, i.e. guide books, handbooks, courses of study, teaching materials, etc.. There were two positions possible which could have been chosen for defense in the handling of these kinds of studies. One position would be that a guidebook is not research in terms of face validity and, therefore, should not be examined. The other position would be that no document can be judged not competent research until it has been given an objective, scholarly examination. Because the first of these alternatives could not be defended on any grounds other than a scholarly guess, it was decided to obtain all documents within a priority and examine them.

Another problem was the meaning of a non-generalizable study sometimes

called a local study or service study. The question of "localness" was soon discovered to be not one of geographical locality, as it may be indicated by the title, but one of intent. For example, a controlled experiment is a local study in that the population sample is drawn from a particular geographical area. If a study uses a sample from a specified locality, this does not make the study any more local than if the locality's specification were omitted in the report. However, if a study is intended to answer questions for a local school system, for example, then it must be considered a local study and/or not generalizable. Such studies would serve a community, analyze conditions, encompass a small georgraphical area such as a school system, a city, or even a county. The content would be demographic as well as contain other status measures of little use beyond the community.

The question of generalizability has another dimension, usefulness. Herein is a value judgment involving not only a qualitative problem but also a quantitative problem. The question may be stated, "If information cannot be generalized to a larger population such that it can be used broadly, of what value is it?" The investigators decided that this decision was best left to the intentions of the researcher. If the intent was obviously to serve the interests of a community and the instruments used were designed to elicit localized data which was not applicable to other communities, then it was concluded that the researcher did not intend to obtain generalizable information. If the information was not generalizable, it was of questionable use to the profession as a whole. Because the objective of this project was to provide information to the profession as a whole, studies resulting in findings which were of local use only were considered not competent.

Several other kinds of studies presented problems concerning competence. These were compositions, methods materials, and texts. In order for these to be acceptable as research, their contents had to be concerned with a central

variable, criteria for inclusion established and tested, and the scope delimited on logical grounds. For example, a collection of Renaissance music transcribed and edited for junior high school choirs would require pre-established criteria for range, tessitura, parts allocation, etc. Unless these were pre-established, the procedures were considered inadequate. If a method of teaching was devised, its validity was considered inadequate unless a control group or some other competent comparative devise was established. If a course of study was developed, the validity of the materials as adequate tools for teaching and learning was questioned unless the materials in their intended sequence were pretested and posttested.

Survey studies provided the investigators with a peculiar difficulty. Many of these studies are gross, dragnet affairs which, when reported, give a wealth of data whose usefulness is questionable. Much of it is useful only to the historian. Some of it elicits an equivocal response. A very little of it is significant. The results of such studies were included in the syntheses only when they were believed to provide useful information to the profession.

Another factor in the judgment of competency is the replicability of a study. If the reported procedures for an experimental design in particular are not such that the study could be replicated, it follows that either the research was incompetent or the report of the study incomplete. Because a judgment as to the completeness of the report would presuppose full knowledge of the study prior to the writing of the report, only the report could be judged. It may be that a number of competent studies have been eliminated as incompetent on this basis, but without sufficient evidence in the report no other judgment could be made.

Categorization Process

The initial screening process used in the project placed the bibliography cards, in terms of the context of the titles, into two categories: relevant titles and non-relevant titles. Only those titles which suggested contributions to the teaching of music were considered relevant. After it was found that the relevancy and the specific categorization of a title could only be determined by reviewing the document, and after it became obvious that all the titles considered possibly relevant could not be reviewed in the time allocated, the priority system was instituted for the procurement of documents. All published reports, unpublished faculty reports, and dissertations in the relevant file were then obtained for review.

Those documents found after review to be non-relevant and/or non-competent reports in terms of the definition and rationale developed in the project, were discarded and the bibliography cards placed in either a non-relevant or non-competent category by the investigators. Those reports found to be relevant and competent were abstracted and after re-evaluation by the investigators, the abstracts and the bibliography cards were coded in terms of the central variable and filed according to the categorization system given below. The categorization system was developed from the definition of music education and the resulting identification of the elements in the process of music education. The topics and sub-topics in the system were considered to be major central variables in the classification of relevant research in music education.

Code	Category
T	Teacher
T1	Personal Factors
T1-a	Abilities (General)
T1-b	Attitudes
T1-c	Characteristics
T1-d	Cognitive Abilities

T1-e	Emotional Traits
T1-f	Interests
T1-g	Musicality
T1-h	Personality
T1-i	Values
T2	Social Factors
T2-a	Class (social)
T2-b	Professional Behaviors
T2-c	Non-professional Behaviors
T3	Education
T3-a	Programs and Processes
T3-a1	Teacher Selection
T3-a2	Curricula
T3-a3	Administrative Structure
T3-b	Knowledges
T3-c	Performance Skills (Musical)
T3-d	Teaching Techniques
T4	Professional Competencies
T4-a	Programs and Processes
T4-a1	Inservice Education
T4-a2	Teaching Load
T4-a3	Administration Organization
T4-b	Knowledges
T4-c	Performance Skills (Musical)
T4-d	Qualifications
T4-e	Teaching Techniques
<u>S</u>	<u>Student</u>
S1	Personal Factors
S1-a	Abilities (General)
S1-b	Attitudes
S1-c	Characteristics
S1-d	Cognitive Abilities
S1-e	Emotional Traits
S1-f	Interests
S1-g	Motivation
S1-h	Musicality
S1-h1	Abilities
S1-h2	Discriminations
S1-h3	Performance
S1-i	Personality
S1-j	Values
S2	Social Factors
S2-a	School Activities
S2-b	Social Status
S3	Education
S3-a	School Experience

S3-a1	Achievement
S3-a2	Participation
S3-b	Non-School Experience
S4	Post-High School
P	**Teaching-Learning Process**
P1	Transmission of Culture
P1-a	History
P1-b	Literature
P1-c	Theory
P2	Acculturation of the Individual
P2-a	Perceptual Skills
P2-a1	Listening
P2-a2	Reading
P2-b	Expressive Skills
P2-b1	Composing
P2-b2	Playing
P2-b3	Singing
P3	Aesthetic Sensitivity
P3-a	Musical Creativity
P3-b	Taste
P4	Undifferentiated Concepts
P4-a	General Music
P4-b	Programs and Curricula
C	**Constraining Elements**
C1	Administration and Supervision
C1-a	Administrative Organization
C1-b	Administrative Practice
C1-c	Faculty Schedules
C1-d	Supervision
C1-e	Scheduling
C2	Community Influence
C3	Contests and Festivals
C4	Philosophy
C5	Teaching Aids
PME	**Programs in Music Education**
PME1	Status and Practices
PME1-a	Total Music Program

PME1-b	Elementary School Music
PME1-c	Secondary School Music
PME1-d	General Music
PME2	Analysis of Curricula
PME2-a	Elementary School Music
PME2-b	Secondary School Music
PME2-c	General Music
PME3	Evaluation of Programs

Processes for ERIC

As an amendment to the original contract, the project became a temporary satellite of the Educational Research Information Center (ERIC). The project supplied the Center with microfilms of the competent research included in the syntheses as well as a few studies of unique design, and resumes of the microfilmed documents which included a content abstract and index terms.

Microfilm

When a document was determined to be a report of relevant and competent research and an abstract of it had been completed, it was sent to a microfilming agency for photographing on 16mm film. The objective was to send ERIC a positive photographic copy of each document. Several documents were included in one microfilming job to facilitate handling. The resulting microfilms constituted several rolls of approximately one-hundred feet of film. At the conclusion of the project, these rolls were sent to the Central Office of ERIC in Washington, D.C.

There were exceptions to the above procedures. Certain libraries refused to release the original documents from their archives or to trust their being sent through the mails. These libraries were prevailed upon to have the 16mm films made by a local microfilming agency on a requisition basis. The results of this procedure were a variation in the quality of the microfilming and a considerable increase in cost per frame for these particular documents.

One competent and relevant study was not microfilmed. This was originally obtained prior to the institution of the ERIC procedures. When it was reordered, it was found to be missing at the holding library.

Indexing

The process of indexing was undertaken on an experimental basis. A firm thesaurus of terms was not the objective. It was understood that the effort in this project was experimental and subject to subsequent revisions if the original terms proved inadequate. The basic problem in certain areas of knowledge, such as music education, is that their very nature leads to "bound" terms. For example, "reading" becomes "music reading" and "history" becomes "music history." The result is a multitude of bound terms which makes the indexing process difficult.

For most documents, eight to ten terms were developed which would provide a description of the nature of the document. A most helpful procedural guide was found in the Abstractor's Guide of the Documentation Center at Western Reserve University. This guide is basically designed for making Telegraphic Abstracts, but it served well as a device for remembering the variables and elements to be indexed. No attempt was made to apply the "role" or "link" indicators which are part of the Telegraphic Abstract system.

Resumes

For each document placed on 16mm film, a resume was composed. The objective of the resume was a complete description of the document for retrieval purposes and for scholarly screening of the literature available on a specific topic in music education. Thus, a complete citation, a 250 word abstract of the document, and indexing terms were entered on a form supplied by the Central Office of ERIC (see Exhibit 11, Appendix G). The resume was a reduction of the

larger abstract made from the original document in the abstracting process.

Synthesizing Process

After the relevant and competent reports had been abstracted and then reviewed by the investigators, the data relating to each sub-category were synthesized to show relationships and conflicts in the findings. The relationships of the data in any category to other categories was noted through cross-referencing. This organization and synthesis of the data is presented in CHAPTERS V, VI, VII, VIII, and IX of this report.

An evaluation was made of the research reviewed and abstracted in each major category for reporting in the conclusions section of the report. Implications of the data for practices in the public schools and for needed research in music education were outlined during the synthesizing process for presentation in the final section (CHAPTER X) of the report.

References

1. Larson, William S. (Ed.). Bibliography of Research Studies in Music Education, 1932-1948. Washington, D.C.: Music Educators National Conference, 1944.

2. Larson, William S. (Ed.). Bibliography of Research Studies in Music Education, 1949-1956. Washington, D.C.: Music Educators National Conference, 1957.

3. U. S. Department of Health, Education and Welfare. Education Directory, 1962-1963, Part 3: Higher Education. Washington, D.C.: U.S. Government Printing Office, 1963.

4. U. S. Department of Health, Education and Welfare. Enrollment for Advanced Degrees, First Term 1961-1962: Final Report. U. S. Government Printing Office, 1963.

5. U. S. Department of Health, Education and Welfare. Earned Degrees Conferred: Bachelor and Higher Degrees, 1961-1962. U. S. Government Printing Office, 1963.

6. Burckel, Christian E. (Ed.). College Blue Book. Yonkers-on-Hudson, New York: Universal Lithographers, 1960.

7. Cartter, Allan M. (Ed.). American Universities and Colleges. (8th Ed.) Washington, D.C.: American Council on Education, 1962.

8. List of Members. Galesburg, Illinois: National Association of Schools of Music, 1962.

9. Small, Arnold M. (Ed.). "Forward." In Bibliography of Research Studies in Music Education, 1932-1944. Chicago, Illinois: Music Educators National Conference, 1944, p. 5.

10. Gage, N. L. "Preface." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand McNally Co., 1963, pp. iv-vi.

11. Edwards, Allen L. Techniques of Attitude Scale Construction. New York: Rinehart and Co., Inc., 1960.

12. Edwards, Allen L. Techniques of Attitude Scale Construction. New York: Appleton-Century-Crofts, Inc., 1957.

13. Ferguson, George A. Personality Measurement. New York: McGraw-Hill Book Co., 1952.

14. Ferguson, George A. Statistical Analysis in Psychology and Education. New York: McGraw-Hill Book Co., 1959.

15. Campbell, Donald T. and Julian C. Stanley. "Experimental and Quasi-Experimental Design for Research on Teaching." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand McNally Co., 1963, pp. 171-246.

16. Tatsuoka, Maurice M. and David V. Tiedeman. "Statistics as an Aspect of Scientific Method in Research on Teaching." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand McNally Co., 1963, pp. 142-170.

17. Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Co., Inc., 1956.

18. Culbertson, Jack A. and Stephen P. Hencley. Educational Research: New Perspectives. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1963.

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CHAPTER IV

ANALYSIS AND EVALUATION OF RESEARCH LITERATURE IN MUSIC EDUCATION: 1930-1962

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ANALYSIS AND EVALUATION OF RESEARCH LITERATURE IN MUSIC EDUCATION: 1930-1962

The amount of literature produced during the years 1930-1962 which was identified by title alone as possibly being research reports in music education was quite voluminous. Neither titles nor the sources of publication were found to be indicative, however, of reports of research. It was necessary to examine the reports before making this judgment. On examination, it was found that only a small portion of this literature could be considered relevant and competent research according to the definitions and rationale employed in the project. The material which follows presents an analysis of this literature in terms of its source, quality of the reports reviewed, and the types of research abstracted as well as its distribution according to the delineated categories of music education. An evaluation in terms of competency and relevancy of the reports reviewed, but not abstracted, concludes this section.

Analysis of Research Literature

The Catalogue

The titles identified and listed as possibly indicating research reports related to music education were not obtained indiscriminately. It was assumed that dissertations and theses in music education would generally be reports of research, and that titles of such documents should be listed. Titles of other research would also be found in these documents. Unpublished research reports, indicated to be such by college and university faculty members, also should be listed. It was further assumed that other research relating to music education would possibly be found in those journals known to report research in music and music education. Such titles would be identified in other research documents and also would be recommended by music education faculty. It was in

terms of this rationale that the titles of possible research reports were obtained for listing in the project catalogue. (See CHAPTER III for a more complete explanation of this process.)

From these sources, covering the years 1930-1962, 11,810 titles were listed in the project catalogue as possibly being research reports related to music education. Of this total number, 691 were titles of dissertations, 9976 were titles of theses, 1043 were titles from published sources, and 100 were titles of unpublished reports. Further screening of the theses titles resulted in a reduction to 7316 titles. The titles of 2660 theses were classified as encompassing topic areas not relevant to the definition of music education developed in the project. The total catalogue then contained a total listing of 9150 titles possibly indicating research reports in music education. The most prominent source for possible research titles was masters' theses, with published reports and doctoral dissertations following in that order. These data and that which follows are given in tabular form in TABLE I.

After it was realized that it would be impossible to review this number of reports (twice the number estimated) in the time allocated to the project, the priority system for procurement and reviewing documents was placed into operation. All published documents, unpublished faculty research, and all doctoral dissertations produced during the years 1930-1962 were to be reviewed. Masters' theses were to be postponed, with the exception of those which were selected because either they were known to be competent research or because they were referred to in other documents or recommended by music education faculty. Thus, 7093 titles of masters' theses were listed but the documents were not reviewed. Of these titles, 3946 were tentatively estimated by title alone to be in music education according to the project definition. In terms of the ratio of competent and relevant theses (approximately 19 percent) to

TABLE I

TOTAL NUMBER OF TITLES (1930-1962) INITIALLY IDENTIFIED AS POSSIBLY BEING RESEARCH STUDIES RELATED TO MUSIC EDUCATION: BY TYPE OF REPORT AND STATUS IN PROJECT*

Type of Report	Status in Project: Abstracted or Reviewed	Not Available or Obtainable	Listed: Not Reviewed	Totals
Dissertations	591	12	88	691
Theses	212	11	9753** (7093)***	9976 (7316)***
Published Documents	988	27	28	1043
Unpublished Documents****	27	69	4	100
Totals	1818	119	9873 (7213)***	11,810 (9150)***

* Titles obtained from the 708 bibliographic sources listed in Appendix E and the 273 research studies listed in the Bibliography (B).

** Contains 2660 titles not believed to be relevant to music education.

*** Corrected after elimination of the 2660 non-relevant theses titles.

**** Unpublished faculty and student papers.

the selected number of theses reviewed in the project, this number of theses would probably produce after review, if the same ratio held, approximately 750 competent and relevant studies. It is highly doubtful that this ratio would obtain since the theses reviewed were a select sample. The other 3147 theses titles were considered to be probably related to music education in that the titles indicated information the teacher needs to know in order to function in the teaching-learning situation--information such as the relationship of breath and lip pressure on the production of tone on the brass instruments.

During the procurement process, it was found that 119 documents (12 dissertations, 11 theses, 27 published reports, and 69 unpublished reports) were not obtainable or available. This reduced the total catalogue to 9031 titles. An interesting fact here is that the titles of the 69 unpublished faculty reports, which were found not to be available, were supplied by college and university personnel. Also, 120 titles (88 dissertations, 28 published reports, and 4 unpublished reports) in the priority categories were obtained too late for procurement. These titles were found toward the end of the abstracting and review process.

Of the total of 9031 titles now in the project catalogue, 1818 documents were obtained, abstracted and/or reviewed. This number included:

a) all available dissertations completed during 1930-1962 with the exception of the 88 titles obtained too late for procurement,

b) all available published documents produced during 1930-1962 with the exception of the 28 titles obtained too late for procurement,

c) all available unpublished documents 1930-1962 with the exception of the four titles obtained at the close of the abstracting process, and

d) a group of 212 theses selected because either they were known to be

competent research or the titles seemed to definitely indicate research on topics in music education.

Not reviewed, because of the time factor and the resultant priority system, were the 7093 masters' theses of which 3946 were believed to be in music education, and 3147 probably related to music education.

Reports Reviewed

The status of the 1818 reports (dissertations, theses, published reports, and unpublished reports) reviewed in terms of relevance and competence is given in TABLE II. It was found that only 273 reports of this total number could be considered relevant and competent research in terms of the definitions and rationale employed. Or, in other words, only 15 percent of the 1818 reports met the stated requirements of relevance and competence. Of this total number, 1013 reports were judged to be in music education but not competent as research, and the topic content of 532 reports, almost one-third of the total number reviewed, was judged not to be relevant to music education. These data suggest that some confusion exists in the profession as to what are relevant topics in music education, and what constitutes competent research.

Of the 591 doctoral dissertations reviewed, 182 (31 percent) were found to be both relevant and competent research; 240 dissertations (41 percent) were found to be relevant but not competent; and 169 (28 percent) were found not to be relevant to music education as defined. A breakdown of these data by type of doctoral degree is given in TABLE III.

A similar status ratio was found in the analysis of the masters' theses: 40 theses (19 percent) were found to be both relevant and competent research; 145 theses (68 percent) were considered relevant but not competent; and 27 theses (13 percent) were considered not relevant to music education. A breakdown of these data by type of masters' degree is given in TABLE IV.

TABLE II

STATUS BY TYPE OF REPORT OF THE 1818 TITLES (1930-1962) ABSTRACTED AND/OR REVIEWED IN TERMS OF RELEVANCE TO MUSIC EDUCATION AND COMPETENCE AS RESEARCH

Status	Frequency By Type of Report				
	Dissertations	Theses	Published Documents	Unpublished Documents	Totals
Relevant and Competent	182	40	51	0	273
Relevant, Not Competent	240	145	610	18	1013
Not Relevant	169	27	327	9	532
Totals	591	212	988	27	1818

TABLE III

STATUS BY DEGREE OF THE 591 DOCTORAL STUDIES (1930-1962) ABSTRACTED AND REVIEWED IN TERMS OF RELEVANCE TO MUSIC EDUCATION AND COMPETENCE AS RESEARCH

Status	Degree				
	Ph.D.	Ed.D.	DMA DME	D.Mus.	Total
Relevant and Competent	81	97	4	0	182
Relevant, Not Competent	65	164	11	0	240
Not Relevant	92	69	6	2	169
Totals	236	327	21	2	591

TABLE IV

STATUS BY DEGREE OF THE 212 MASTER'S STUDIES (1930-1962) ABSTRACTED AND REVIEWED IN TERMS OF RELEVANCY TO MUSIC EDUCATION AND COMPETENCE AS RESEARCH

Status	Master's Degree						Total
	MA	MS	MM	MME	ME	M(?)	
Relevant and Competent	12	7	9	10	2	0	40
Relevant, Not Competent	52	12	47	22	6	6	145
Not Relevant	14	0	6	1	3	3	27
Totals	78	19	62	33	11	9	212

Of the total number of 803 graduate studies reviewed, only 222 (28 percent) were considered both relevant and competent studies. These studies were completed at 57 institutions. TABLE V gives a list of these institutions.

These data give evidence which negate the belief held by some persons that dissertations and theses are usually reports of research in certain specified areas of study or knowledge. This would at least be true in music education. In many instances, as these data show, dissertations and theses are not on topics relevant to music education and they are not reports of research, at least as conceived in this project (see CHAPTER II). It is possible that a few of the studies considered not to be relevant were not completed for degrees in music education. Hence, they would not be concerned with topics relevant to music education. They were listed in the source materials and in reports from institutions, however, as dissertations and theses completed for degrees in music education. These data would also indicate, with the possible exception mentioned above, that some colleges and universities are accepting reports other than research reports for thesis and dissertation requirements.

Fewer of the published reports, as compared percentage-wise with dissertations and theses, were considered relevant and competent research (see TABLE II). For example: 51 published reports (5 percent of the total) were considered both relevant and competent; 610 reports (62 percent) were considered relevant but not competent; and 327 published reports (33 percent) were considered not relevant. None of the unpublished documents were considered both relevant and competent research. Of the 27 unpublished documents reviewed, 18 were considered relevant but not competent, and 9 were considered not relevant in terms of the concepts employed in the project.

The analysis of the published reports is interesting in that it substantiates the notion that confusion seemingly exists in the profession as to

TABLE V

LIST OF INSTITUTIONS AT WHICH THE 222 RELEVANT AND COMPETENT GRADUATE STUDIES IN MUSIC EDUCATION WERE COMPLETED

Institutions	Doctoral Degrees			Masters' Degrees	Total
	Ph.D.	Ed.D.	Other		
Appalachian State Tchrs. College				1	1
Boston University	2	4	1	1	8
Bowling Green State Univ. (Ohio)				1	1
California University (Berkeley)	1	4			5
California University (Los Angeles)		1			1
Chicago Musical College	1		2		3
Cincinnati University		2		2	4
Clemson Agricul. College				1	1
Colorado State College of Educ.	1	3		1	5
Colorado State University		1			1
Colorado University		5			5
Columbia University	6	7			13
Denver University		1		2	3
Florida State University	5	3			8
Florida University		1			1
Fresno State College				1	1
George Peabody College for Teachers	6	3			9
Harvard University		1			1
Idaho University				1	1
Illinois Normal University				1	1
Illinois University		9			9
Indiana University	4	8			12
Iowa State University	14				14
Kansas University	7	6		9	22
Loyola University (Chicago)		1			1
Maryland University		2			2
Michigan University	1	1			2
Minnesota University	3			1	4
Nebraska University	1	1			2
New England Conservatory of Music				1	1
New York University	4	2		1	7
North Dakota University				1	1
Northeast Missouri State College				1	1
Northwestern University	8			1	9
Ohio State University	2			1	3
Oklahoma University		1			1
Oregon State College		1			1

TABLE V (Cont.)

Institutions	Doctoral Degrees			Masters' Degrees	Total
	Ph.D.	Ed.D.	Other		
Oregon University		8			8
Pennsylvania University		2			2
Pennsylvania State University		4			4
Pittsburg University	2				2
South Carolina University	1				1
South Dakota University		1			1
Southern California University	1	4	1		6
Stanford University		1		1	2
Syracuse University		2		1	3
Temple University	1				1
Tennessee University				2	2
Texas Christian University				1	1
Texas University	3	2		4	9
Texas Southern University				1	1
Virginia University		1			1
Washington University		1		2	3
Wayne State University		3			3
Western Reserve University	1				1
Wisconsin University	5				5
Yale University	1				1
Totals	81	97	4	40	222

NOTE: The number of studies per institution listed in the above table does not relate to the percentage of such studies completed at each institution during the years 1930-1962.

what is relevant and competent research in music education. The majority of the titles of published reports were obtained from references in dissertations and theses. In these studies, the published reports were referred to as "related research" or research studies. That this confusion exists, is also supported by the type of unpublished reports submitted by college and university personnel. None of these reports, as indicated above, could be considered relevant and competent research.

Another interesting analysis of the data on published reports is the source of publication. TABLE VI presents these data. Here it is of interest to note that only fifteen of 51 research reports were published in six journals and magazines (Journal of Research in Music Education, MENC Bulletin, Music Education Research Council Bulletin, Music Educators Journal, Music Supervisors Journal, and School Music) allied to the music education profession. The other thirty-six reports were published in journals of other or related disciplines, or in special institutional or agency documents. These data would suggest that either researchers sought publication sources outside of those allied to the profession, or that the professional publications, at least at some time, did not accept or encourage research reports for publication.

The types of research represented in the 273 reports considered to be both relevant and competent research in music education is given in TABLE VII. These data reveal that the research reports were generally of two basic types--Descriptive and Experimental Research. The largest number of competent studies (135) were of the survey-questionnaire type. Only two studies of a philosophical nature were found which were competently performed. One of these was primarily an analysis of documents and critiques of the ideas of major thinkers and the other was a survey of what philosophical system appeared to be functioning in selected school systems. Both of these were considered descriptive

TABLE VI

PUBLICATION SOURCES OF THE FIFTY-ONE PUBLISHED REPORTS CONSIDERED RELEVANT AND COMPETENT RESEARCH

Publication Source	No.
Book (Published Research Report)	1
California J. Elementary Education	2
Child Development	1
Child Development Monographs	2
Southern Regional Education Board Bulletin	1
J. Applied Psychology	7
J. Educational Psychology	6
J. Educational Research	1
J. Experimental Education	3
J. Psychology	2
J. Research in Music Education	7
J. Social Psychology	2
Kansas Bulletin of Education	1
MENC Bulletin	1
Music Education Research Council Bulletin	1
Music Educators Journal	3
Music Supervisors Journal	1
Pedagogical Seminar and J. of Genetic Psychology	2
Pittsburg Public Schools	1
Psychological Reports	1
School Music	2
Smith College Studies in Social Work	1
University of Iowa: Studies in Child Welfare	1
University of Iowa: Studies in Psychology of Music	1
Total	51

TABLE VII

DISTRIBUTION BY TYPES OF RESEARCH OF THE 273 REPORTS (1930-1962) FOUND TO BE RELEVANT AND COMPETENT RESEARCH IN MUSIC EDUCATION

Type of Research	Frequency
Descriptive	
Survey and Structured Interview	10
Survey Questionnaire	133
Standardized Tests	27
Document Analysis	16
Data Analysis	15
Experimental	
Single Group Technique	21
Control-Experimental Group	35
Multiple Groups	8
Test Construction	8
Total	273

research. Historical research, per se, was not considered relevant to the definition of the project in that historical accounts are not analyses of the teaching-learning process but descriptions of what it was at one time. Such studies were considered to be related to music education and information of interest to the music teacher. Some relevant and competent studies included historical descriptions of the problem investigated. All too often, the methodology was inappropriate or inadequate but the study was accepted because the validity of the findings did not rest on the historical portion of the study. (See CHAPTER II for a discussion of the requirements for historical and philosophical methodologies.)

The distribution of the 273 reports of both relevant and competent research in terms of the delineated elements or categories of music education is presented in TABLE VIII. Here it is seen that the largest number of studies dealt with problems concerning the Music Teacher, the Music Student, and The Teaching-Learning Process. Studies dealing with problems of Constraining Elements and Programs in Music Education, the other delineated categories, were generally of the service, non-generalizable type. This accounts in large measure for the fewer studies in these categories.

Evaluation of Research Literature

Competency

Major inadequacies found in the 1013 reports reviewed and classified as relevant but not competent research (see TABLE II) were of several kinds. In many cases the problem stated by the investigator proved to be different from that which he investigated. In some cases, the problem, objectives, or purposes were not clearly and succinctly stated and they had to be deduced by the reviewer. In other cases, problem statements were only partially revealing of the scope of an endeavor. There were designs demanding attitude

TABLE VIII

DISTRIBUTION OF THE 273 REPORTS (1930-1962) FOUND TO BE RELEVANT AND COMPETENT RESEARCH ACCORDING TO DELINEATED CATEGORIES OF MUSIC EDUCATION

Categories	Number
The Teacher	69
The Student	67
Teaching-Learning Process	62
Constraining Elements	38
Programs in Music Education	37
Total	273

measurement where the investigator failed to use appropriate techniques for attitude scale development and construction. Numerous examples of the failure to validate data gathering instruments were found. The most common inadequacy, particularly among doctoral studies, was the lack of competent investigation. These studies contained problems which were, and still are, in need of adequate attention. However, they were nothing more than an extended library paper or, in some cases, an essay without a bibliography.

Inadequacies found in the 240 doctoral studies classified as not competent research are listed with frequency of occurrence in TABLE IX. These inadequacies are referred to as "major" in that they were the most glaring deficiencies in these reports. Many reports had several deficiencies. It will be seen from these data that a large number of the doctoral studies failed to specifically state and define a research problem--one that functioned as a guide for collecting data and for arriving at generalizations, even if the generalizations were only temporary in nature. A problem may have been stated in some studies, but it was of such pedestrian nature, i.e., "to review the development of music in the public schools of Smith county," that generalizations were not demanded--no research problem existed to be solved. None of the studies, which proved to be historical reviews after their receipt, were true historical research. Rather they were random reporting of past events. A large number of the studies were mere collections of opinions and speculations. None of these studies met the requirements for philosophical research. These were classified as "essays." Others were reports of activities, lists of music or instructional materials, guidebooks for conducting certain types of musical activities, and proposed courses of study. The contributions of such studies, even if a problem had been defined, would be slight in terms of usefulness to the profession as a whole. The common deficiency in all of these studies was the

TABLE IX

MAJOR INADEQUACIES WITH FREQUENCY OF OCCURRENCE FOR THE CLASSIFICATION OF 240 DOCTORAL DISSERTATIONS (1930-1962) AS NOT COMPETENT RESEARCH

Major Inadequacies	Frequency
No Defined Research Problem	
Courses of Study (Proposed)	5
Essays	84
Guidebooks	2
Historical Reviews	5
Lists of Materials	3
Reports of Activities	1
Presentation, Design, and Techniques	
Conclusions Inappropriate	3
Conclusions: None	1
Data Analysis Incomplete	4
Design: Inappropriate or Inadequate	48
Information Incomplete	1
Materials and Techniques Not Validated	50
Statistics Inappropriate	1
Non-Generalizable Data (Service Studies)	32
Total	240

lack of a specifically defined research problem.

The lack of validation of data gathering instruments and techniques and the use of inappropriate or inadequate research designs, were the major deficiencies of a technical nature. In some studies the information given and the data analysis were incomplete. In other studies, conclusions were inappropriate to the data, and in one study, statistical techniques were inappropriate to the design and sample. One study failed to list conclusions.

Also classified as not competent research were thirty-two doctoral studies which presented non-generalizable data. These were the type of studies usually classified as "service studies." They may have been competent studies in terms of their designs and executions, but their intent was judged to be local or restricted in nature. Because of this, the data were not useful to other researchers in that the generalizations did not indicate trends or relationships which could be utilized as a basis for thinking or action in other situations. The designs employed were not unique, but traditional methods of attacking the types of problems usually dealt with in studies of these kinds.

The analysis of the major inadequacies of the 145 masters' theses classified as not competent research revealed a situation very similar to that found for the doctoral studies. These data are presented in TABLE X. Here again was found the lack of a defined research problem and a predominance of reports of the essay type. The major deficiencies of a technical nature, as with the doctoral studies, were in the use of inappropriate or inadequate designs, or the failure to validate data gathering materials and techniques. In the selected sample of theses chosen for review, only two studies were of the non-generalizable type. It is not believed that this small number of theses so evaluated is indicative of the remaining body of theses not reviewed. Rather, it is suspected that a large portion of the unseen theses will be of the non-generalizable type. At least a cursory examination of the titles would lead one to this conclusion.

TABLE X

MAJOR INADEQUACIES WITH FREQUENCY OF OCCURRENCE FOR THE CLASSIFICATION OF 145 MASTERS' THESES (1930-1962) AS NOT COMPETENT RESEARCH

Major Inadequacies	Frequency
No Defined Research Problem	
Compositions	4
Contest-Festival Lists	3
Essays	52
Handbooks	2
Lists of Solos	4
Method Books	5
Reports of Activities	1
Design and Techniques	
Conclusions Inappropriate	6
Data Analysis Incomplete	2
Design: Inappropriate or Inadequate	37
Materials and Techniques Not Validated	26
Statistical Techniques Inappropriate	1
Non-Generalizable Data (Service Studies)	2
Total	145

The distinguishing inadequacy of the 610 published reports classified as not competent research was the lack of a specified research problem and the extremely large number of reports of the essay type. It can be questioned if all the authors of these reports (articles) considered their work to fall in the category of research. Most of them were polemics or speculative essays. These published reports were reviewed because they were indicated to be research reports in other documents and by faculty respondents. Those persons making this decision undoubtedly considered research in a somewhat different frame of reference than that utilized in this project. The major technical deficiency was the lack of sufficient information for making valid judgments on the competency of the work. This lack of information may have been due to editing practices of the various publication sources. Data on the major inadequacies of the published reports reviewed in the project are presented in TABLE XI.

The major inadequacies of the eighteen unpublished reports obtained from college and university personnel (see TABLE II) was the lack of a specific research problem. Of the total number of unpublished reports reviewed, fourteen were of the essay type and one was a list of teaching materials. In terms of technical inadequacies, one report was lacking in sufficient information and one failed to validate data gathering materials used in the work.

The data presented above on the major inadequacies of the reports reviewed in the project and considered not to be relevant research, gives further evidence that the music education profession is not generally knowledgeable of research concepts or techniques, at least not those used as criteria in this analysis and evaluation, and those necessary to obtain data for the improvement of practices in music education. Graduate student research, the greatest source of research data for the profession, reveals this lack of

TABLE XI

MAJOR INADEQUACIES WITH FREQUENCY OF OCCURRENCE FOR THE CLASSIFICATION OF 610 PUBLISHED REPORTS (1930-1962) AS NOT COMPETENT RESEARCH

Major Inadequacies	Frequency
No Defined Research Problem	
Courses of Study (Proposed)	3
Essays	515
Method Books	1
Reports of Activities	4
Reviews of Research	2
Presentation, Design, and Techniques	
Data Analysis Incomplete	1
Design: Inappropriate or Inadequate	18
Information Incomplete	49
Materials and Techniques Not Validated	14
Non-Generalizable Data (Service Studies)	
Total	610

sophistication. Only a small percentage of the doctoral studies completed during the years 1930-1962 revealed true research endeavors. Of the selected masters' theses, only a small percentage were actually research studies. The published literature, referred to as "research reports" and so indicated in source materials and by music education faculty, clearly indicates a lack of differentiation of research from other scholarly activities. None of the unpublished reports submitted by college and university personnel could be considered research in terms of the definitions and rationale employed in this project.

Relevancy

The relevancy of a research topic to an area of knowledge or a field of study is usually controlled by the perimeters which define the area or field of study. If the area has not been defined, any topic remotely related to the area might be considered a relevant topic for research. The latter consideration seems to be the case to some measure in music education. Almost any topic in music, education, or in other fields such as physics for that matter, has been considered at some time or other, to be relevant to music education. It must be assumed that such topics were considered relevant in that the research was accepted for higher degrees in music education, or it was so classified by the profession. The relationship of the topic to music education was not the major concern. Rather, the research was concerned with substantive knowledge in the topic area. The contents of the graduate research studies, published reports, and unpublished reports, reviewed in this project leads to these generalizations. A list of the general topic areas found in the 532 reports judged not to be relevant in terms of the definition of music education are given in TABLE XII.

This listing of non-relevant topics shows the spread and divergence of

TABLE XII

TOPIC AREAS OF THE 532 REPORTS (1930-1962) NOT CONSIDERED RELEVANT TO MUSIC EDUCATION

Topic Areas
Acoustics
Atypical Children
Biographies
Church Music
College Music Students (Non-Music Educ. Majors)
College Music Instruction (Non-Music Educ.)
Community Music
Effects of Music
Folk Music
Instrumental Performance Practices
Music Therapy
Musical Analysis
Musical Criticism
Pre-School Subjects
Private Schools
Professional Music and Musicians
Psychology of Music
Speech
Studio Teaching
Television
Test Development
Voice Techniques

topic areas in only those studies which were reviewed. They were included in the review process because the titles were thought to be related to problems in music education and they were so indicated in other research documents and reported by music education faculty. Such was not the case. The title of a study in many cases bore no relationship to the content of the work. It will be recalled that 2660 titles were eliminated in the preliminary screening process on the basis of non-relevancy. These titles were judged to definitely indicate musicological and other topic areas.

The listing of topic areas not considered relevant to music education adds further weight to the previously stated concern that confusion and misunderstanding certainly exists in the profession as to what constitutes relevant research topics. The perimeters of music education have not been specified and delineated by the profession, and in many cases, any topic may be considered relevant. The acceptance by the profession of some set of perimeters for this area of study would appear to be an initial necessary step in building an organized body of knowledge in music education.

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CHAPTER V

RESEARCH RELATING TO THE MUSIC TEACHER

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RESEARCH RELATING TO THE MUSIC TEACHER

This chapter and the succeeding four chapters present syntheses of the research completed during 1930-1962 which was found to be both competent and relevant. The technique by which the information is synthesized varies with the type of project and the variety and quantity of information. A study of several variables may appear under several subsections. Too, a single variable may be mentioned under more than one category. Studies of relationships often have implications for more than one category. The syntheses include that information which was considered most important in the accepted studies. Abstracts for the studies included in the syntheses are presented in Appendix A. References to the abstracts and to Bibliography B are indicated in the text by the authors' name and the date (in parentheses) of the research report.

As a variable in the teaching-learning process in music, the music teacher brings to the process a psychological set, behavior patterns, skills, information, characteristics, and a personality which are a result, in part, of previous experiences and the environment of the moment. Research on the music teacher as a variable in the teaching-learning process seems to apply to four factors: personal factors, social factors, professional education, and professional competencies. Some of these are developed prior to the teaching-learning process and comprise the basis for functioning. Others act as functioning elements in the process. Thus, the concern for these factors lies in their development antecedent to the process as well as their function in the process.

Personal Factors

The personal factors of the music teacher include those factors which distinguish him as an individual. They include his non-musical abilities, attitudes in his work and toward other situations, physical characteristics and such characteristics as age and marital status, and the factors of in-

telligence, interests, musicality, personality, and values. These are the factors which may influence the teaching-learning process because they are injected into that process when the teacher is involved.

Abilities

The abilities of music teachers, other than musicality, musical achievement, and intelligence, have not been examined in research studies. The areas of psychomotor abilities, social intelligence, spatial abilities, other artistic abilities, and aptitudes in types of endeavors other than music were not among the competent research studies. Intelligence (see below) was considered, but the varieties of measures and the varieties of cognitive abilities measured by the different kinds of measures were not considered.

Attitudes

The attitudes of various teacher groups in education toward school music were studied by four investigators. Snapp (1953) in his study of vocational interest found that public school music teaching was the least preferred position among four groups of musicians -- teachers of college applied music, teachers of college theory and history, teachers of public school music, and professional symphony musicians. Only forty-one percent of the public school music teachers rated it their first choice. Evans (1958) studied the factors which were believed to affect the attitude of the elementary school classroom teacher toward teaching music. The overall attitude toward teaching music was found to be favorable. Home musical experiences were listed more frequently as a factor in favorable attitudes than was participation in school music organizations. Subjects having a higher number of incidents of musical experiences also were higher in a favorable attitude. Mohr (1946) found little concern among elementary school classroom teachers for the development

of specific skills and understandings in music. Johnson (1961), in a study of attitudes and philosophies of music teachers, found no strong agreement, unity, or consistency concerning music in the schools among high school music teachers, music supervisors, or college and university music teachers. This disparity included such problems as performance, methods of instruction, subject matter, music reading, music theory, and teacher preparation.

In an analysis of music teacher temperament in secondary school instrumental and choral teachers, Michael, Barth, and Kaiser (1961) found that job satisfaction was evidently not related to temperament generally. Calder (1962) found that job dissatisfaction among former music teachers was related to the musical immaturity of public school students, a poor student attitude toward music, and the level or quality of the music used in the school. The most dissatisfied group among the teacher drop-outs were those who had taught both instrumental and choral music. Those who had taught in the secondary school were significantly more dissatisfied. Rhinehart (1962) found similar factors for withdrawal from teaching music in the schools. At least sixty percent of his respondents listed the following: inadequate equipment, unsatisfactory class scheduling, inadequate financial appropriations for music, tension evolving from noise and physical effort, additional duties other than music, quality of school discipline, and unfavorable attitude of the administrators and/or faculty. Steg's study (1955) revealed a positive relationship between job satisfaction and salary level. Only sixteen percent of those in the lowest salary bracket, $2,400-$3,000 range, were very satisfied with their work. Of those in the highest bracket, $5,000 and above, seventy-seven percent were very satisfied. The degree of perceived strain in their work had a negative relationship with salary level.

In Good's study (1961), classroom teachers agreed that music should have

a more important place in the school, but twenty-five percent disliked teaching it and felt inadequate to the task. Another thirty-eight percent shared this view but felt they could do an adequate job with the aid of a music teacher.

Characteristics

No studies have been devoted specifically to the analysis of music teacher characteristics per se. These kinds of data, namely, marital status, sex, age, etc., are scattered through the literature. For example, Christy (1956) found that age correlated with achievement in a music aptitude battery which included the Drake Musical Aptitude Test, Seashore Measures of Musical Talents, and the Madison Tonal Imagery Test. Christy also found that women achieved a higher average than men on the Madison test. Sperry (1958) found that most of the women subjects in his study taught vocal music and the men taught instrumental music. Strub (1957), in one of the few comprehensive studies in this area, found that the top quartile of seventy-five school music teachers who were rated for teaching success, differed significantly from the lowest quartile in several characteristics. They were older; were married; a larger number held master degrees; had taught longer; had a longer history of musical activity and interest; had a higher college grade average in general and in music theory in particular; and were active in undergraduate professional and honorary organizations.

Intelligence

Specific studies concerning the cognitive abilities of music teachers were not found in the research literature. Reference and data on this variable are scattered throughout the literature as a variable among many within numerous studies. Christy (1956), for example, found a low but positive correlation between intelligence and achievement on a battery of music tests. Barth

(1961) found that teachers who rated high in job satisfaction and as outstanding in their work also demonstrated a higher general mental ability than did a randomly chosen sample from a population of high school instrumental and choral teachers. Nohavec (1943) did not find mental abilities as a particularly indicative element in an ability profile of music education majors relative to their success in an existing program or in student teaching. Tilson (1932) found that music education majors had a higher average in intelligence test scores than non-music majors. This investigator also found (1934) that subjects who, as undergraduates, were above the mean in the sample in mental abilities were above the salary mean of the same sample six years later.

Interests

Three studies have been reported on the interests and factors influencing the interests of music teachers in the public schools. Snapp (1953) developed a vocational guidance instrument, the Musicians Interest Inventory, and applied it to a population of musicians including teachers of college music theory and history, teachers of college applied music, teachers of public school music, and professional symphony musicians. Public school music teaching was the least preferred position among the four groups with only forty-one percent of the public school teachers rating it their first choice, and one percent of the other three groups rating it as a first choice. Schroer (1956) studied the factors in the backgrounds of selected college students to determine what factors were largely responsible for their choice of the music education curriculum. The following factors were found in varying degrees of importance: (a) a piano at home, (b) playing instrumental solos, (c) orchestra participation, and (d) student conducting. The school music teacher was found to have been most influential, with the private music teacher being ranked second in importance. Differences were found between men and women in that women

indicated more influence from singing solos and singing in church choirs. For the men, dance band participation and playing in small ensembles and community or civic instrumental groups were rated higher than singing.

In a study of the persistence of teachers in public school music teaching, Sperry (1958) found that those who had members of their immediate families in the teaching profession tended to remain in the teaching profession. The continuance of college studies while employed as a music teacher was also characteristic. A majority of the men who left the profession reported doing so either for financial or military reasons.

In addition to these three studies, Nohavec (1943) found that the Strong Vocational Interest Inventory revealed no pattern which could be considered as uniquely belonging to music education majors. Both Strub (1957) and Evans (1958) found that longevity of interest in music was related to interest in music teaching in the schools.

Musicality

The musicality of the music education major or the school music teacher, as differentiated from other music majors and other professional musicians, was not analyzed specifically in the period 1930-1962. Again, the information is scattered among several studies. Nohavec (1943) could find no differences between music education majors and other majors in scores on the Seashore Measures of Musical Talents. As did other majors, music education majors averaged above the means for these tests with the exception that they equalled the mean on the loudness test.

Christy (1956), using the Seashore Measures of Musical Talents, the Drake Musical Memory Test, and the Madison Tonal Memory Test, found that students in the Bachelor of Music curriculum were superior to those in the Bachelor of Music Education curriculum on the Drake test only. Aptitude in tonal memory

was found to be somewhat greater among instrumentalists than vocalists. Tilson (1932,1934) found that music education majors scored higher on the Seashore tests than non-music majors. Schmitz (1956), in a study of the prognostic value of the Seashore Measures of Musical Talents and the Kwalwasser-Ruch Test of Musical Achievement, found no significant difference between graduates from the music education curricula and drop-outs from the curriculum.

Personality

The personality of the public school music teacher as a variable in the teaching-learning process has received little attention in the research literature. Barth (1961), using the Cattell 16 PF Test and the Thurstone Temperament Schedule, found that school music teachers who were identified as outstanding differed from a random sample. The outstanding music teachers measured higher in general mental ability, perseverence and persistence, self-sufficiency, permissiveness, and confidence. They also revealed less tension, less anxiety, more activity, greater leadership qualities, and a higher degree of emotional stability. In conjunction with Michael and Kaiser, Barth (1961) analyzed the personality differences between three groups of male and female secondary school music teachers of varying degrees of rated competence and self-expressed job satisfaction. Despite differences in judged competence and degree of vocational satisfaction, scores of the three groups of music teachers on two personality inventories yielded similar dimensions of temperament. The elite group of competent and satisfied teachers showed a dimension of sophistication. The contrasting group of less satisfied and less competent teachers displayed additional dimensions reflecting defensiveness-dependence accompanied by a relative lack of ambition, and extroversion that was impulsive and naive in its expression. All three groups of choral and instrumental teachers possessed comparable dimensions of temperament.

The personality adjustment of music education majors was studied by Soares (1962) through a comparison with the adjustment of science and physical education majors. Scores on the MMPI revealed no significant differences in the relative degree of adjustment indicated by the "self-concept," "ideal-concept," and "reflected-self" scores of music and science majors. Both music and science majors reflected a less-enhanced feeling of personal worth because music majors believed they had made a frivolous choice of major by society's standards and science majors had made a second best choice of major by personal standards. Music education majors appeared to have a somewhat lower personality formulation of how they appeared to others than did the two other groups. There was no statistically significant difference in the relative degree of adjustment between music, science, and physical education majors. However, music education majors did reveal a pattern of less adjustment than did the physical education majors.

The relationship of teacher personality to the teaching-learning process and the implications for teacher selection were found in four studies. Ehlert (1949) found personality weaknesses as a major cause for music teacher failure in the opinion of administrators. On the other hand, Fletcher (1956) found that for beginning teachers, professional relationships were the source of least concern in the opinion of administrators. Brown (1955) studied the major weaknesses of secondary school music teachers and found that lack of emotional stability and tactfulness were thought to be among the major deficiences. Warren (1961) reported that a primary reason why academically talented students dropped music in high school was the personality and classroom techniques of the music teacher.

Values

The values held by music teachers have received one direct comparative

study by Tippetts (1960) and indirect study by Hevner (1930). Tippetts found that art, English, music, and theater arts teachers scored similarly on values using the MMPI and the Study of Values by Allport-Vernon-Lindzey. Their aesthetic values were dominant and economic values most recessive. Aesthetic value scores were practically identical for male and female music teachers. Following the anthropological reasoning of Mead, et al, it was concluded that male teachers in art, English, music, and theater arts have a tendency toward values and interests which are considered to be feminine in our culture. The value patterns of prospective and experienced teachers of the arts showed only minor differences. None of the other groups rated the aesthetic value as dominant in their heirarchy of values as did the subjects in the four arts. Parenthetically, it should be noted that for school administrators and teachers of business and exact science, the aesthetic value was the most recessive. Concerning the musical values of college music majors compared with those of non-music majors, Hevner (1930) found that both music students and psychology students showed the same tendency to prefer revisions of 21 musical compositions. The musicians preferred a more elaborate revision and the psychology students preferred a simpler revision.

Social Factors

The social factors relating to the teacher are his socio-economic position in and outside of the profession, his professional social behaviors, and his non-professional social behavior. These are factors which are believed to influence his work and are related, directly or indirectly, to his effectiveness in the school.

Class and Status

The class and status of the school music teacher within and without educa-

tion has had little analysis. What information has been found is applicable by inference or only indirectly. Calder (1962) found that reasons for leaving the music teaching profession were related to accepting another position offering higher salary, better working conditions, and/or more prestige. Two other factors were related to professional mobility in status and salary, namely, limited opportunities for advancement in public school music teaching, and a limited initial and maximum salary. Rhinehart (1962) found a similar pattern of reasons for leaving public school music teaching. The factor most often mentioned was inadequate salary. Sperry (1958) found that for men and women of similar experience and educational background, there was little difference in the salary earned as music teachers. Also, it was indicated as in other studies, that the majority of men left the profession for financial reasons as well as for military reasons.

Professional Social Behavior

Little attention has been given to the professional social activities of teachers. Strub (1957) found that teaching success was related to longevity in the profession and advanced degrees in education. This investigator found, however, no relationship between success in teaching and postgraduate membership in professional organizations, or publication activities. Sperry (1958) reinforced the belief that those who remain in the profession continue their own professional education.

Non-professional Social Behaviors

No research has been conducted which analyzed this aspect of teacher behavior. Such research would include the social interests, community activities, family life, political interests and activities, and similar behaviors.

Education

Studies on the professional education of the music teacher include analyses of all the variables which affect that process. Four major areas have been identified: (1) programs and processes, including techniques for selecting and retaining prospective teachers, curricula for professional education, and administrative organizations which make the functioning of the sequence and auxiliary services possible; (2) knowledges about music and other areas; (3) professional skills in performance; and (4) teaching techniques in music.

Programs and Processes

Teacher Selection. The prediction of success in the music education curriculum has been the basis of several studies. Tilson (1932) attempted to determine the predictive value of the Seashore tests and intelligence tests (ACE) for student success in a music education curriculum. The correlation between the scores on the Seashore tests and term grades in ear-training and sight-singing was +.399 for the entire group. Correlations were higher for students rated high in musical talent than for those rated low in musical talent (as measured by the Seashore tests). The correlation between intelligence test scores and term grades in ear-training and sight-singing was +.399, also higher for "talented" students. It was concluded that the test was useful for predicting failure in the music teacher curriculum. A follow-up of this study in 1934 (127 graduates) obtained replies from eighty-six former students. Of these former students, seventy-six were still teaching with nineteen teaching only music. The same tests were administered and the average score was slightly lower on the Seashore tests but the ACE scores averaged one percentile higher. Those teachers who were above the mean on both tests were above the mean salary for the group. Those who were no longer teaching had had low composite scores on the tests when administered to them while in college.

Mosher and Otterstein (1934) used a battery of standardized tests to develop a predictive battery for music education majors. It was found that tests other than music tests offered higher predictive measures than did the music tests.

Schmitz (1956) investigated the prognostic value of the Seashore and the Kwalwasser-Ruch tests for success in the music education curricula. It was concluded that course grades below the mean could be predicted with greater accuracy than those above the mean. Low correlations confirmed that the prediction of grades in the upper and lower quartiles based on the test scores in those respective quartiles did not appear plausible. The B form of the Seashore tests was the most effective forecaster of grades in any of the tests or combination of tests employed in the study. The range of the scores on the Kwalwasser-Ruch test was not sufficiently wide to be of adequate discriminating value for guidance in the college level music education program. The mean scores for graduates and the non-completion group did not differ sufficiently to indicate that survival could be predicted.

Genge (1959) developed criteria for guidance and selection-retention practices in music teacher education. It was concluded that these should precede college admission. Successful participation in music groups was considered an important prerequisite for admission to a music education program. Leadership experiences prior to the junior year in college were not considered of great value. The greatest degree of agreement concerning selective practices was in the areas of musical competencies. The use of standardized tests was rejected or considered of questionable value after the initial testing program. Advising was considered one of the most important areas in the guidance and selection-retention of music education majors.

Duda (1961) developed an instrument whereby student teacher behavior could be predicted in the teaching-learning situation in terms of several standardized measures, observation of student teacher behaviors for effective teacher

behavior, and academic achievement. It was found that several of the measures correlated significantly with teacher behavior and academic achievement. It was estimated that teacher behavior in the classroom was not a result of the grade level of teaching but was more probably a result of basic personality structure. The correlating measures included were college grades, all music grades, scores on the Aliferis Music Achievement Test (rhythm sub-test), scores on the music teacher scale of the Strong Vocational Inventory, scores on the Pd scale of the MMPI, and scores on two factors of the IPAT test.

Applicable to the problem of teacher selection is the problem of behavioral patterns which successful teachers display and which may be useful as guidelines for teacher selection. Strub (1957) found that superior teachers, as undergraduates, were in the upper quartile of 105 subjects in age, pre-college out-of-school music training, college grades in general, college music theory grades, and undergraduate membership in professional and honorary organizations. No significant relationships with superior teaching were found in the kind of pre-college in-school music training, college grades in applied music and student teaching, undergraduate membership in social organizations, number of years of college level private lessons, number of years of membership in band, orchestra, or choir, or in the standards held in a performance group at the college level. Christy (1956) found no significant difference between drop-outs and graduates among Bachelor of Music and Bachelor of Music Education students in the distributions relating to sex, degree curricula, or performance media.

Several survey studies have been made of selection practices. Wolfe (1936) found that prospective teachers were selected primarily on their performance ability in applied music and participation in music organizations. No general practices were found. Grove (1953) found also that proficiency in applied music was a primary deciding factor. Also a desirable personality was considered necessary for teaching as well as successful completion of lower level

undergraduate courses of study. Bulgin (1957) found, with few exceptions, that in non-accredited colleges all entrance to professional curricula in music teacher education was a post-entrance selection. Borg (1959) found that minimum music entrance requirements to teacher training programs varied greatly and that no general practices could be found. In eighty-three percent of the institutions studied, no means of testing musical skills or teaching techniques were used either prior to or after student teaching. Heads of departments even contradicted themselves when responses on a questionnaire about practices were checked in subsequent interviews.

Curricula. Wolfe (1936) analyzed music education curricula in four-year state teacher colleges. Curricular balance between general and specialized education (including student teaching) varied with the latter ranging from thirty-one percent to seventy-one percent of the total hours required for the degree. The median requirement in specialized education was forty-one percent of the total hours required for the degree. The median requirement in specialized education was forty-one percent of the total hours. Wolfe noted that many institutions required only a small number of hours in music and that credit in applied music, orchestral instruments, and conducting was not required. The majority of these institutions were small colleges with less than twenty-five majors and two to four instructors. The typical curriculum for music education majors consisted of voice, piano, sight-singing, ear-training, dictation, harmony, music history and appreciation, conducting, methods for music teaching, and supervised teaching of music.

Patrick (1955) surveyed the course and degree requirements in music education of four-year colleges and universities in Texas. The evaluative criteria were the standards published by MENC, NASM, MTNA, and AACTE. Approximately fifty-five percent of the white schools compared favorably with these

criteria. Two-thirds of the Negro colleges met the standards of minimum requirements in basic music courses while all of the white and eighty-five percent of the state universities compared favorably with all the criteria. State controlled institutions ranked highest in the area of music performance. None of the Negro colleges met the minimum standards of performance. More than half of all types of the institutions compared favorably with the criteria in the area of professional music education.

Bulgin (1957) investigated the program of selected liberal arts colleges not accredited regionally and thence not accredited by the AACTE. The evaluative criteria used were a combination of those published by the NASM and the AACTE. Divisions of study which fell below the NASM standards dealt with music, while the mean number of hours required outside of music exceeded the standards in the non-music area. Electives were found most frequently in applied music and least in professional education. Approximately one-half of the colleges required a senior recital, while eighty-seven percent required a secondary medium of performance, usually piano. None of these colleges met the curricular requirements of the NASM in terms of content and credit-hours for all five divisions of the music education curriculum. Omissions in terms of the criteria were in the following areas: general education, music theory, conducting, instrumental techniques, specific areas within the professional sequence, and the assignment to student teaching.

Mitchell (1958) investigated the kinds of music projects and activities offered by colleges and universities for in-service teacher education. The courses offered by ten percent of the ninety public institutions studied were in music appreciation, history, theory, applied music, and education. They also offered clinics, conferences, and director's sessions in connection with events for school performers. Courses offered by approximately ten percent of the 115 private institutions studied included courses in applied music, music

appreciation, and education. They also offered clinics, conferences, and director's sessions in connection with vocal festivals for school performers. More of the courses from all institutions were offered for undergraduate credit than for graduate credit. Some institutions provided non-credit offerings. More of the courses were offered on-campus than off-campus. The clinics offered by the largest number of institutions were clinics for band, orchestra, vocal directors, and elementary classroom teachers.

Borg (1959) used the MENC standards in an analysis of curricula offered by a selected group of twenty-four universities and colleges. The study was limited to basic requirements, minimum standards, course offerings, and credits for music education students. Although heads of music departments agreed that teacher training institutions should conform to the minimum MENC standards, the data revealed that not all of the institutions surveyed met the minimum standards, especially in the areas of musical performance and professional education. The administrators in the teacher colleges indicated that the requirements in general education overbalanced those in music and professional education. In departments and schools of music, eighty percent of the majors were in music education and eighty-five percent elected this program in their freshman year.

Collins (1960) surveyed the music offerings in higher education for the Southern Regional Education Board. The schools investigated were primarily in the southern region of the United States. Findings applicable to music education indicated that the Bachelor of Music Education degree was emerging as the most frequently earned degree. The Master of Music degree in applied music seemed to be the most frequently earned advanced degree with the Master of Music Education degree ranking second. State certification requirements seemed to be universal for the country. There seemed to be few curricular changes, a trend interpreted to be the result of the stabilizing influence of the NASM on

music curricular development in the United States. Enrollment statistics indicated a trend toward institutional specialization of degree and curricular offerings. The trend toward establishing new graduate programs seemed to be declining; some institutions were dropping their graduate curricula.

Coe (1961) analyzed the curriculum content for the education of public school music teachers of selected institutions by means of a rating form developed from statements of needs by school music teachers. Graduates in equal numbers from teacher colleges, liberal arts colleges, and state universities were used as subjects for rating their own educational experience. The results of a Q-sort technique of forced-choice ratings revealed that: (a) the teacher must possess personable qualities and leadership ability, and (b) there is a need for more methodology in the training of the music teacher. In regard to the institutional programs, little difference was found in the required semester hours for graduation in the three institutional types. The majority of the faculty were listed in the applied music areas in all three types of institutions. The student-faculty ratios were as follows: state universities 8:1, state colleges 7:1, and liberal arts colleges 4:1. Music education was the most common major in all institutions.

Peterson (1956), in a similar study which identified major problems and needs of music teachers, reported that the preparation for teacher-student relationships that teachers received was not considered realistic in relation to the situations they found as teachers, or was not presented in a manner meaningful to them. A need was recognized for more practical training in specific administrative techniques and more efficient methods of sharing successful or promising practices, and for more training and experience in the principles and techniques of personal relations. The teachers also needed to re-examine their attitudes toward the relative value of music for public performance and

music for the inspiration of the participants.

The study of Hills (1962) revealed that the college courses considered of little or no value by music teachers were: Introduction to Education, Secondary School Administration for Teachers, and Preventive Medicine. Student Teaching, Techniques of Secondary School Teaching, and General and Educational Psychology were generally felt to be of value in preparation for teaching.

Ernst (1955) concluded from his survey of music in large city schools, that music teacher education was geared to the teaching of vocal and instrumental groups and that the training of teachers for general music class instruction had been neglected.

Administrative Organization. Among the many studies which analyzed the organizational structure in higher education for teacher education, only two studies were found to be competently performed during the 1930-1962 period. Grove (1953) analyzed student personnel or guidance services for students in music education. Among the fifty-two institutions studied, the general selection and admission practices in the majority of the schools were the responsibility of the general admissions director of the college rather than the music school or department representative. Generally, the music education guidance counselor was a part-time counselor and a part-time teacher appointed by the head of the department. The counselor's knowledge of vocational requirements for music education majors was the primary consideration given in appointing a counselor by the majority of privately and publicly supported institutions, while conservatories reported experience in public school music to be the first prerequisite. Fewer than twenty-five percent of the institutions reported special conference days on which high school officials were invited to confer with their former students.

LeBow (1960) surveyed for comparative purposes fifty-six universities

having a complex administrative organization comparable in size to Wayne State University. All of the universities studied had autonomous colleges of education and autonomous colleges of liberal arts and sciences. Course offerings in music education showed a distribution of thirty-nine percent in liberal education, twenty-one percent in professional education, and forty-six percent in specialized education. There was little deviation from the NASM-MENC-AACTE curriculum standards. Universities having an autonomous school of music had the greatest percentage of curricula showing the highest conformity to these standards. Autonomous schools of music seemed to be able to meet best the investigator's criteria for the preparation of certified school music teachers.

Knowledges

The analysis of what knowledges music education majors possess at any given moment in their higher education has not been studied directly. Two studies have been concerned with testing practices and test development. Gray (1960) analyzed subject matter testing practices in selected state university music education curricula. After obtaining sample tests, a "minimum standards" test was compiled and sent to cooperating institutions for faculty evaluation. Only fifty-five items were eliminated from a total of 351 by a panel of sixty-three faculty members. The areas of knowledge in the test included music history, theory, conducting, orchestration, and music education.

Briggs (1951) began the development of a standardized test which could be used in music education at the graduate level. The three basic areas of education, psychology, and music were included and subdivided into nine areas of educational administration and curriculum, general psychology, history of education, music education, educational psychology and measurement, psychology of music, history of music, theory of music, and instrumentation. The test was validated against the subjects' grade point averages and teacher ratings

of the subjects. There were 200 subjects from thirteen colleges and universities for the final form of the test which contained 250 items whose potency was analyzed. The analysis revealed that 196 items of the final form were usable, with no more than ninety percent and no less than twenty percent of the group able to answer all items correctly.

Information on the status of knowledge among prospective music teachers is scattered in the research literature. Kiely (1956) analyzed the competencies of prospective elementary classroom teachers. In terms of criteria established by a panel of educators, achievement in music theory by itself, was not adequate for the needs of teaching music in the elementary school classroom. Borg (1959) found that music education majors considered the most difficult part in the teaching of music to be the understanding of the abilities and characteristics of elementary school pupils. Gray (1962) studied the concepts of self-image and ideal-teacher-image held by student teachers before and after the student teaching experience. The acquisition of some kind of understanding was revealed in the fact that successful student teachers changed in concepts toward the ideal-teacher-concept while unsuccessful student teachers did not. Cowan (1952) studied the pre-college knowledges of music education majors. Deficiencies were found in music theory and factual, as well as listening, background in music.

Performance Skills

Research on performance skills in professional music education is basically concerned with the quality of the curricula in which the skills are learned. This is analyzed in studies on proficiency tests, specific techniques for producing the skill, and analyses of the skill in terms of quality and value.

One study was found which was interested primarily in the undergraduate

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elementary classroom teacher. Kiely (1956), using criteria validated by a panel of educators, found that 127 seniors in the elementary teacher education curriculum were close to achieving a desired level of singing. They demonstrated, however, little ability in reading new vocal music.

The musical skills of music education majors have had much more analysis. Freeburne (1952), in a survey of functional piano skills, found that larger schools and schools belonging to the NASM were more aware of the necessity of requiring students to attain a certain degree of piano proficiency. Bulgin (1957) found that eighty-two percent of his survey respondents (42 institutions) required a secondary medium of performance, usually piano. These colleges did not follow NASM recommendations for proving competence in applied skills and gave little attention to the levels of achievement in these skills. Webber (1958) analyzed piano requirements for music education majors in 253 institutions. Piano credit in forty-six percent of the institutions was the same for all music education majors regardless of the area of specialization. Part of the minimum piano requirements in eighty-six percent of the institutions was stated in levels of attainment. Only three functional abilities most frequently required were (a) sight-reading hymns and community songs, (b) playing piano accompaniments, and (c) harmonizing melodies. Borg (1959) found that eighty-eight percent of the twenty-four institutions he studied required a piano proficiency test for music education majors. Goetzman (1962), in a study of the minor performance area classes in music education curricula, found piano proficiency tests generally required. The requirements of NASM were not met in the minor instrument area by forty percent of the 172 colleges studied. There was inadequate training in band and orchestral instruments for vocal and piano majors, and inadequate voice training for instrumental majors in the music education curriculum. State supported schools offered more instrumental classes than other schools.

Wolfe (1936), in a general study of professional needs, obtained graduate opinions that more preparation was necessary in conducting, orchestral instruments, instrumentation, materials, methods of instruction, and student teaching. Dahlin (1951) surveyed 325 colleges to obtain information on the teaching of conducting to music education majors. More larger institutions than small offered courses in conducting. Three percent of the small schools (less than 800 students), nineteen percent of the medium sized schools (800-3,000 students), and thirty-five percent of the large institutions, offered graduate courses in conducting. Undergraduate courses were offered in ninety-three percent of the small schools, ninety-eight percent of the medium sized schools, and all of the large institutions. The types of music used in conducting classes were standard works (eleven percent), music suitable for school use (nineteen percent), and both types (seventy-one percent). Among institutions on the semester basis, forty-six percent offered two semesters, twenty-eight percent offered two quarters, and twenty percent offered three or more quarters of conducting.

In an attempt to find some means for standardizing the evaluation of applied music, Burkhalter (1961) developed criteria for evaluating major instruction in music education. His 332 respondents disagreed about the areas of proficiency required for graduation and proficiency required for college entrance. Fourteen criteria of the nineteen finally developed represented competencies which related to the problems of teaching rather than the problems of performing. Those criteria not acceptable to the respondents were in the areas of performing repertoire, transposition on the major instrument, memorization, performance proficiency, and reading ability.

The amount and quality of teacher education in stringed instruments (as minor instruments) was studied by Phelps (1951). This investigator determined that string proficiency tests and standards for a one-semester course ranged

in equivalency from one to two years of instruction for a ten or twelve year old child. The instruments studied by students varied from the violin only to all four orchestral stringed instruments--violin, viola, 'cello, bass viol. Required string class work ranged from two-thirds of a semester to three semesters. Fourteen institutions had string classes of like instruments, eight had mixed classes, and eight had a combination plan. In the institutions studied, 287 students were enrolled in stringed instrument classes at the time of the study. Of these, 113 did not look forward to teaching strings, 127 anticipated such teaching with pleasure, and twenty-five were undecided. Wikstrom (1960) analyzed early string literature for its appropriateness of use in heterogeneous string classes for music education majors. The problem was to select materials within the technical limitations of the students, yet appropriate for their level of musical sophistication. The criteria for difficulty were derived from string method books. A collection of forty compositions resulted which included works of such composers as Vivaldi, Corelli, Stamitz, J. C. Bach, Handel, W. A. Mozart, L. Mozart, and Pergolesi.

The skills needed for general musicianship, the content of the courses designed for the development of these skills, and the anticipation of success in these courses have been analyzed by several researchers. Dean (1936) studied the prognostic value of the Seashore tests for success in sight-singing. It was concluded that there was very little relationship between success in sight-singing and previous musical experience. However, the relationship between the Seashore tests and success in sight-singing was found to be relatively high, from .65 to .78. Procopio (1956) developed a program of tape recorded self-instruction in rhythmic, melodic, and harmonic dictation for music education majors. After an experimental period, it was concluded that college music students were able to learn to take rhythmic, melodic, and harmonic dictation by mechanical means with a minimum amount of faculty instruction or supervision.

The experimental group was found to make at least as much progress in all three kinds of dictation as those students who learned through the regular classroom procedure. Hargiss (1960), in an experimental study of sight-singing, found a significant improvement in a group using the piano as an aid. The subjects, who were preparing to be elementary classroom teachers, also were able to acquire simple pianistic skills. The integration of instrumental with vocal experience in developing sight-reading skill also proved to be of value in the development of musicality, music reading, and musical performance. Nicholson (1952) compared the harmonic content of high school choral music and the harmonic vocabulary provided the prospective choral director in his undergraduate courses. There was little agreement among the colleges surveyed regarding the content of harmony courses. Further confusion resulted in the many different symbols and terms used to designate harmonic combinations. A serious deficiency in the area of modulation study was noted in the harmonic preparation of the choral director. Over fifty percent of the high school choral music examined contained extensive modulations.

Teaching Techniques

Teaching techniques acquired by the student in higher education prior to his professional status as a music educator have not been analyzed. Research in this area of professional education has been concerned with general sequences of experiences, the administrative organization for student teaching, the self-perceptions of student teachers, and the teaching success of student teachers.

In a study of the context for student teaching, Wolfe (1936) found that colleges having less than twenty-five music majors and four faculty members on the music education staff offered the least contact hours and varied experiences in student teaching. Steg (1948) compared the student teaching practices in 123 institutions of five types. In seventy-five percent of the institutions, music

majors took student teaching under complete or partial supervision of the same person who had taught them techniques of teaching. The number of grade levels at which music majors were required to teach varied from one to four levels with two levels most frequently indicated. One-third of the institutions used campus schools, two-thirds used public schools, and a few of the institutions used parochial schools. Fifty percent of the student teachers were required to prepare lesson plans. Most student teachers were permitted to choose their own materials. Less than ten percent of the student teachers helped plan or prepare groups for public performance. The extent of contact varied from one quarter or semester to two full years with two-thirds of the schools requiring one quarter or one semester.

Herren (1955) analyzed student teaching practices in thirty-four colleges by sending a questionnaire to directors of student teaching and studying the college catalogues. Many inconsistencies were found between the two sources of information concerning course descriptions, prerequisites for student teaching, clock hours spent in student teaching, the number of courses in student teaching offered, and credit granted for courses in student teaching. There were few required qualifications for student teaching administrative and supervisory personnel. Bulgin (1957) found that instrumental technique courses were not required as prerequisites to student teaching in ten of the forty-two non-accredited colleges. Seven of these colleges did not offer instrumental instruction. In some of these colleges, general methods of teaching were not offered. Borg (1959), in a study of student opinions, was informed by ninety-four percent of the twenty-four institutions studied that student teaching was begun in the senior year. Sufficient preparation to do student teaching was indicated by sixty-seven percent of the respondents. Another seventy-one percent indicated that they had completed enough student teaching to help them do satisfactory work as teachers. On the other hand, Cassie (1959) found that

student teachers were in need of more observation experiences prior to student teaching in order for them to meet criteria which were developed from the professional literature. Snyder (1961) surveyed student teaching practices at thirty institutions. Less than half of the respondents indicated that teaching experiences were provided prior to student teaching. General education professors supervised the student teachers in all subjects in six institutions. The student teacher spent at least one period per day in actual classroom teaching.

The most comprehensive, recent study of organizational factors in student teaching was made by Janszen (1962) who investigated off-campus student teaching in 376 institutions. Thirty institutions indicated that college personnel visited potential cooperating schools prior to selection for placement of student teachers. Approximately eighty percent of the institutions indicated that the competency of the cooperating teacher was a factor which determined the selection of a school. Twenty-four institutions reported that student teachers had experience in at least two cooperating schools. Seventeen institutions required student teaching on the elementary, junior high, and senior high school levels. Thirty institutions indicated that admission to student teaching was based on a consideration of multiple factors, such as academic background, maturity, background with children and youth, personal physical traits, and proficiency in the major teaching field. Admission to student teaching was determined by a committee of faculty members in twenty-nine of the institutions. Twenty-three institutions indicated that mutual acceptance of each other by the cooperating teacher and the student teacher was a factor determining assignment. Student teachers were provided with literature describing the program and outlining procedures to be followed. Faculty visitations occurred approximately every two weeks. Three-fifths of the institutions reported student teaching seminars scheduled on a weekly basis. In fourteen institutions,

college personnel determined grades; in thirteen institutions the cooperating teacher shared the responsibility. Twenty schools made cash payments to cooperating teachers and two institutions offered in-service training to cooperating teachers. Most institutions preparing teachers of music were classified as liberal arts colleges.

Two studies were conducted in 1962 on the self-perceptions of prospective teachers of music. Gray (1962) found that music education students who were given a high rating in their student teaching had a self-concept commensurate with the self-concept of selected, successful teachers. Groff (1962), in a survey of elementary classroom student teachers in six colleges, asked the student teachers to rank eleven subject areas in terms of their ability to teach them. The ability to teach music was ranked ninth by women and eleventh by men.

Teaching success of student teachers and the factors involved have been studied by three investigators. Nohavec (1943) found a great difference between raters' estimates of her subjects' teaching performance and the estimated probable success of students as teachers of music. Strub (1957) found no significant relationship between student teaching grades and success in teaching. Watkins (1958) developed a forty item scale to be used by junior high school students for evaluating student teachers. Other ratings were obtained from cooperating teachers, who used the Beecher Record, and from the students themselves, who used the MTAI. The forty item scale was found to discriminate significantly. The three scales had no significant relationship in the way they rated student teachers.

Professional Competencies

The professional competencies of a music teacher are a factor in the success of music education as an endeavor. There are several fundamental dimensions to these competencies. One of these dimensions involves assumptions about the

music teacher in a structure designed for the teaching-learning process of music, namely, programs and processes. This includes such factors as how much he is capable of teaching, what kinds of curricular responsibilities he can assume, what restraints the administrative structure places on his competencies, and what remedial or enriching services are made available to him. The other dimensions include the directly analyzable competencies which the music teacher does have, namely, his knowledge, professional skills, qualifications, and teaching techniques.

Programs and Processes

Mohr (1946) analyzed the musical problems of elementary school teachers. The data obtained from 524 respondents revealed that four-fifths of all elementary grade teachers taught the music in their classrooms. Two or more grades were taught in one group as frequently as grades were taught separately. Three-fifths of the teachers had no supervisory assistance. These teachers expressed little concern for the development of skills and understandings in music. Their problems were nearly all of the same pattern regardless of educational background, training in music, teaching experience, or whether or not the teacher was assisted by a supervisor.

Klein (1955) studied the administrative structures within which 276 elementary teachers functioned. Three-fourths of the teachers responded that they did teach music. Only eight percent of the respondents had the services of a special music teacher. About one-half of the teachers reported that daily music instruction was provided for their students with an average period being twenty-two minutes in length. When the participants were classified into three groups according to the amount of their musical training, positive correlations greater than +.90 were obtained when training was compared to their reported use of various music teaching activities.

Drake (1957), in a study in the Rocky Mountain Area, found general music teachers predominantly in small school systems. He also found that the majority of the schools had concert bands, marching bands, pep bands, and drum and bugle corps. Orchestras were found in only a few schools. While most of the schools had brass and woodwind ensembles, only one-third reported dance bands. Vocal groups, such as mixed chorus and girls' large ensembles, were found in a ratio of approximately three-to-one over a cappella choirs or boys' ensembles. Drake inferred that the training of the music teacher was a definite determinant of the school music program because these curricular organizations had teachers whose performing major was, in the great majority of cases, either a brass or a woodwind instrument. DeVermond (1959), in a study of elementary school teachers, found a lower percent responsible for classroom music instruction, namely, sixty-eight percent, than that found by Mohr (eighty percent) in 1946.

The teaching loads of music teachers have not received concentrated investigation. Only a small project by Tilson (1934) was reported in the literature. In a study of seventy-six music education graduates from one institution during the depression years, Tilson found that nineteen were teaching only music while thirty-one were teaching music with one other subject, sixteen were teaching music with two other subjects, and four were teaching music with three other subjects. The most common combinations included music, art, and English. Drake (1957) discovered the job responsibilities of music teachers in small schools to be the coordination of the entire program, grades one through twelve. In this capacity the music teacher acted as consultant, supervisor, and teacher.

Knowledges

The knowledges of music teachers, which would range from minute musical details to philosophical constructs, have been given very little direct study.

Much of the information about teachers' knowledges must be extracted from the findings in broad studies. Fletcher (1956) studied the problems of beginning teachers. Of general nature were problems in understanding pupil interests, motivations, and individual differences. There was less concern for problems connected with extra-classroom activities and responsibilities than with those related to instruction. Administrators reported that knowledge of pupil behavior and the control of pupil behavior were the gravest problems for the beginning teacher. Cassie (1959) inquired into the estimates of personal competency held by elementary school vocal music teachers. The knowledge of orchestral instruments, music appreciation, philosophies of music education, comparative teaching methods,and supervisory philosophies and practices were all considered to be inadequacies. Ardrey (1959) found that teachers and supervisors agreed that knowledge of the child voice was among their deficiencies. There were few competencies necessary in classroom music instruction in which the teachers were adequately prepared.

Fenton (1957) analyzed music teachers' effectiveness through the identification of critical incidents in the classroom which changed the direction of learning. It was found that concern for the teacher as a director of learning was the primary concern. The knowledge of group dynamics, philosophical objectives, and interpersonal relationships were inferred to be essential ingredients in effective teaching. Also applicable here was the importance given to a teacher's knowledge about and ability to promote an emotional climate conducive to learning. The number of ineffective incidents reported by male administrators in relation to the music teacher's personal qualities for leadership, skill in setting and defining goals, and interpersonal relationships, could be interpreted as a conflict in certain attitudes and interpretations of the function of the music teacher in the schools in which they worked.

Performance Skills

Studies concerning the professional musical skills of teachers of music in the schools are concerned with three types of populations -- music teachers in general, the elementary school classroom teacher, and the secondary school music teacher. These studies present such information as analyses of skills, self-estimates of competencies in these skills, and the relationship of these skills to teaching success. Two surveys of music teachers in general were made which included elements about professional skills. Ehlert (1949) received responses from superintendents and administrators which indicated that the levels of various performance skills in music were ranked as a least important cause for teacher failure. Woerner (1949) compared the skill attainments of students as estimated by heads of seventeen college and university music departments with the self-estimates of personal musical skills by alumni of these same seventeen institutions. The estimates of attainment made by college and university personnel were higher than the self-estimates of the alumni teaching in the schools. The criteria used were the recommendations of the MENC Teacher Training Curriculum Committee progress report of 1944. In terms of the desirability of skills, forty-seven were listed as desirable but were not listed as needed or useful in the schools.

Klein (1955) investigated 276 elementary school teachers' judgments of their preparation. The respondents generally reported a poor competency in singing and in piano playing. Two-fifths reported the necessity of outside help when learning a song, and only fifteen percent reported the ability to play any musical composition suitably for their students. More than three-fifths reported no undergraduate instruction in class piano, while approximately fifteen percent reported lack of instruction in singing. Evans (1958) found elementary school classroom teachers least confident in singing alone,

singing part-songs, and playing piano accompaniments. Ardrey (1959) found elementary school classroom teachers capable of directing singing activities, but they showed weaknesses in ability to use rhythm instruments and in the skill of listening to music. DeVermond (1959), in a survey of 205 elementary classroom teachers, found that those with piano experience felt that they were better able to carry on classroom music activities than did those without piano experience.

Cassie (1959) found that elementary school vocal music teachers felt competent in sight singing, rhythmic, melodic, and harmonic dictation, choral performance, and technical aspects of voice and singing. They did not feel competent in (a) the pianistic skills of improvisation, modulation, and transposition, (b) arranging and writing choral music, (c) score reading, (d) eurhythmics, or (e) the use of musical instruments. In a study of ninety-eight elementary schools, Good (1961) found that one-third of the classroom teachers could play the piano. One-half of them tried to improve their skills through in-service teacher education.

Secondary school music teachers' skills in the use of harmony were analyzed by Burns (1945) and Kingsbury (1945). Burns found that the most frequently used method for studying the harmony of a composition before rehearsal was performance on the piano. Silent study of the score ranked second. Harmonic skills used most often were: first, aural checking against a score of the chords a group performed; second, transposing from a written key; third, altering the score; and, fourth, making up accompaniments. Composing was reported by twenty-eight percent of the 624 teachers and forty-six percent arranged music. In selecting music, the respondents reported that harmonic aspects were more important than rhythm melody in choral music. Kingsbury's study was modeled after that of Burns with a population of 744 respondents. He found that ninety-

three percent of the subjects used silent study of the score most frequently for rehearsal preparation. The use of the piano ranked second. As to specific practices, eighty-four percent of the respondents reported making alterations of instrumental parts during rehearsals; seventy-six percent reported occasionally writing parts during rehearsals; fifty-seven percent had not written a band or orchestral composition during the past year, and fifteen percent had written three or more compositions during the past year. Of 687 respondents, thirty percent reported making no band arrangements. The most frequent composition types for which arrangements were made were school songs, hymns, folk tunes, patriotic songs, and solo accompaniments.

Petzold (1950) obtained opinions from successful school instrumental music directors on the applied music skills needed in their work. Minimum goals of achievement needed in woodwind teaching included: (a) a knowledge of and ability to demonstrate the fundamentals of tone production for the flute, oboe, clarinet, and bassoon, and (b) performing ability on the following: Clarinet -- equivalent of an intermediate method book and all fingerings; Flute -- equivalent of an elementary method book, range C^1 to G^3; Oboe -- equivalent of an elementary book at slow tempo, knowledge of all common and chromatic fingerings, usable range to D^3; Bassoon -- equivalent of first half of elementary method book, common fingerings, and ability to choose auxiliary fingerings best suited to various situations.

Dahlin (1951) studied the relationship between conducting needs of school music teachers and present practices in teacher education curricula. The 308 music teacher respondents had a 2.7 mean number of semesters of conducting or a 2.9 mean number of quarters of instruction in conducting. No undergraduate courses in conducting were taken by nine percent of the respondents. Those who had such courses ranked activities in the order of emphasis in those courses

as (a) baton technique, (b) elements of interpretation, and (c) conducting live groups. Drake (1957) found that the majority of the 296 teachers in his study had a performance major in woodwinds or brass. Brown (1955) found that the seven greatest weaknesses of music teachers reported by music teachers and school administrators were not related to musical competencies.

Qualifications

The professional qualifications of teacners are a mutual concern of accrediting agencies, school administrators, and institutions of higher education. These qualifications may be seen from several points of view, namely, the level to which teachers are actually qualified generally, the qualifications officially established by accrediting agencies, and the qualifications or quality of work a teacher is capable of fulfilling. Concerning the last of these, the information presented in the preceding sections on Knowledge, and Professional Skills, is also applicable to some degree.

Weegar (1957) produced an historical analysis of music teacher certification in New York State and surveyed certification practices in New York and five other states. Shortcomings in the certification program were found to include a lack of definition of content for teacher preparation courses, no successful way of administering competency requirements as new developments occurred in education. In student teaching, the semester hours of credit in each institution were based on widely varied concepts as to the amount of time required in actual teaching or observation to complete a semester hour of credit.

Drake (1957), in a study of 296 secondary school general music teachers, found that over ninety percent had four years or more of college; two-thirds held a baccalaureate degree; one-third held a masters degree; one-third had a combination vocal-instrumental major; and about one-half had majored in vocal, instrumental, or some other music area.

Ehlert (1949) solicited value judgments from 233 superintendents on the desirable attributes of music teachers as selection criteria. The respondents collectively ranked these attributes as follows: personality, musical training, teaching ability, interest in teaching, cooperation, classroom discipline, intelligence, self-control, health, general culture, scholarship, performing ability, and teaching experience. The musical attributes of the special music teacher (band, chorus, orchestra) generally were considered more important than for the general music teacher.

In his study of the supervisory practices of Southern state departments of education, Noah (1953) found that teachers holding a regular certificate calling for a bachelor's degree were required to have from two to eight years of teaching before the certificate could be renewed. The total number of credits required in music for certification ranged from eighteen to eighty-two semester hours. The credit hours required in preparation for teaching applied music extended in range from eight to fifty semester hours. Practice teaching was required in all states.

Taylor (1962), in a study of prevailing practices in instrumental music supervision, found a common requirement of an examination and a committee interview for teacher candidates which evaluated not only knowledge but personality as well.

Teaching Techniques

The methods used by a teacher in the educational process are inextricably related to what is being imparted. The preceding sections on Knowledges and Professional Skills may well apply in the following synthesis and the studies cited here may have been mentioned earlier. However, in the following synthesis, the central variable is the methodological aspect of the teaching process.

Concerning general aspects of teaching techniques and their relationship to effective teaching, Fenton (1957) found that more non-musical skills than musical skills were listed by teachers and educators of teachers as crucial to effective teaching. Particularly important was the skill of directing the learning process. Ehlert (1949) found that superintendents and school administrators believed that general teaching technique weaknesses were a primary cause for teacher failure. Cassie (1959), in a study of elementary school vocal music teachers, found a need for practice in more than one teaching technique, skill in the use of instruments in the classroom, and techniques for teaching music appreciation and creative activities. Fletcher (1956) found the vocal phase of classroom teaching a great problem to beginning teachers. Particularly cited were the boy's changing voice and the resultant methodological problems in teaching vocal music to boys and maintaining their interest in singing. Brown (1955), in an analysis of the major weaknesses of music teachers in the secondary school, found school administrators and music teachers in agreement that the control of discipline was the most common deficiency. More than half of the respondents in this study listed teaching skill and leadership techniques as weaknesses. Seven of the most frequently mentioned weaknesses were not related to the musical training of the music teacher. There was little difference in the deficiencies of teachers in large or small communities.

The only direct analysis of teaching techniques among these studies was made by Van Sickle (1955) who investigated the interpersonal factors and group dynamics of instrumental groups during rehearsal. He found that players and directors of public school music groups were not equally aware of group dynamic forces. The goals of the players tended to have different directions from those of the directors. Some directors were using known concepts and procedures of group dynamics but were not aware that they were doing so. Generally,

the directors included in the study were not aware of group forces and were not utilizing these to the group's advantage.

Two surveys of elementary school classroom teachers were conducted to ascertain their opinions about their own teaching competencies. Mohr (1946) found that nearly one-third of 524 teachers had not had college or university education in music teaching techniques. Ardrey (1959) found that these teachers were deficient in the techniques for teaching listening, and music reading, and for developing creative activity.

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CHAPTER VI

RESEARCH RELATING TO THE STUDENT

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RESEARCH RELATING TO THE STUDENT

The student is the focal point at the end of the teaching-learning process in music. His learnings are its product. Because it is the student who learns, what the student learns is dependent to some extent on what he is. What the student is determines, in large measure, not only what he can be taught at any one time, but how it can be taught to him. Like the teacher, he brings psychological set, behavior patterns, skills, knowledges, information, characteristics, and a personality into the teaching-learning process. Some of these variables may have developed prior to the formal teaching-learning situation. These same variables and others may be modified by the teaching-learning process. Research on the student, therefore, would be concerned with the identification, appraisal, and status of these variables, their influence and effect on the teaching-learning process in music, and their modification through the teaching-learning process. Studies of these types are reviewed and synthesized on the pages which follow.

Personal Factors

Those attributes of behavior which help to identify and describe the student as a person and a learner in music are considered personal factors in that they relate directly to the student as a person. Some of these factors are the students' general abilities, attitudes, characteristics, emotional traits, interests, motivations, musicality, personality, and values. These factors, to some extent and degree, are operative in the teaching-learning process, and in turn, the process may affect them.

Abilities

The non-musical abilities of music students have not been studied directly.

Indirect study of some abilities, such as intelligence and academic ability, are found in some comparative studies. In such studies, student ability is only one of many variables being considered. Psychomotor ability, which would seem to be a most important ability in reference to music students, has not received research attention. Only the study of Cramer (1958) refers to motor development as a factor in the successful development of fourth grade students in instrumental music. The artistic abilities of students, which also would seem to be of importance in understanding the music student, have been totally neglected in research endeavors. The academic abilities of outstanding high school music students was given some attention by Garder (1953). The data here indicated that outstanding high school students excelled poorer music students and non-music students in academic achievement. The ability receiving the most attention indirectly was that of intelligence. The findings of those studies in which this variable was considered are given in a later section of this chapter.

Attitudes

The studies pertaining to the attitudes of students in the public schools relate to their attitudes toward contemporary music and the learning experiences and programs of music education provided by the schools.

A study by Daniels (1961) was the only study found in the literature which related to the attitudes of school children toward contemporary music. Daniels was concerned primarily with the effect of exposure to contemporary music on the interests and attitudes of a group of ninth grade students representative of lower and middle class families. A general dislike for contemporary music was indicated by the students, but the attitudes of a majority reportedly changed after a brief period of instruction. Daniels attributed the unfavorable attitudes toward contemporary music to be a lack of planned instruc-

tion in music of this type.

The attitudes of school children at various educational levels toward their experiences in music and the music programs in the school were studied by Broquist (1961), Park (1944), Forman (1958), and Gaston (1940). Broquist, who confined his work to a large group of elementary school children representing twenty schools, reported a decline in favorable attitudes toward music as grade level advanced, a better attitude toward music from girls, and a preference for musical performance activities (singing, rhythmic activities, etc.) rather than music reading or writing activities. An interesting finding in this study was that no statistically significant difference was found in attitudes between those students taught by the classroom teacher and those taught by the music specialist.

The study by Park (1944), while concerned with similar purposes, used junior high school students as subjects. The results of this work revealed that the students liked music but that they would rather listen than perform. Those inclined toward performance, especially girls, preferred to sing rather than to play an instrument. A majority of the students, however, indicated a preference for the instrumental type of school music program.

In Forman's study (1958) of the attitudes of high school students (music and non-music) toward the music education program, all participants agreed that the most important practices for a music program were (in order of preference) teaching instruments, music fundamentals, singing, and providing musical programs for the community. Least important practices were indicated to be (in order): developing a self-supporting music program, teaching songs that would be sung later, correlating music with other subject areas, and illustrating the poor examples of music utilized by disc-jockeys and jazz programs.

Gaston (1940), in a study of the attitudes of high school students to-

wards various phases of their musical experiences found that: (a) a majority of students revealed a positive attitude toward most of the phases of their musical experiences, (b) an inverse ratio between grade level and positive attitude toward music seemed to exist, (c) girls had a more positive attitude towards music than boys, (d) extra school music experience by the student appeared to be more dominant in the development of positive attitudes toward music than did the music of the school, (e) intelligence appeared to be a significant factor in the musical scholarship of students, while musical scholarship appeared to be a significant factor in attitudes toward music, and (f) a significant relationship was found between home musical influence and musical scholarship.

Characteristics

Research studies concerned specifically with the characteristics of students are few in number. Data of these types are more often found in studies dealing with other central variables in the teaching-learning process in music. Those studies reported in the literature which were directly concerned with characteristics of the student dealt with the voice changes in adolescent boys, aural perception, and the characteristics of outstanding school musicians.

In a comprehensive study on the characteristics of the male voice before, during, and after adolescent change, Ekstrom (1959) reported that the special characteristics before voice change continued into the changed voice (high-low range, light or heavy quality, flexibility and agility, and tessatura), and that the changed voice had three registers--head, natural, and falsetto. Ekstrom concluded for this work that singing during the period of voice change was not harmful, and that students who sang in choral organizations improved to a much greater extent in agility and flexibility than students in general music classes.

Ward's (1956) work on the aural perceptions of high school students revealed that individual differences in aural perception can result from a common stimulus in the environment. The attaching of meaning to a sound was identified as a subjective phenomenon based partly on conscious factors and partly upon unconscious factors which were not identified by the hearer. The assumption that common experiences (as in a music appreciation class) results in common aural perceptions was indicated to be incorrect. Intellectual activities also were indicated to be a hinderance to aural perception.

The abilities, interests, and temperaments of outstanding high school musicians were given detailed study by Garder (1953). The outstanding male high school musician was found to be less active, less stable emotionally, less objective, less adept in personal relations, and less masculine in interests than his male counterparts. Outstanding female music students, when compared to non-music students of the same sex, were found to be less restrained, less friendly, and less adept in personal relationships. Music Students evidenced a wide versatility of music ability, a wider range of musical interests and preferences, and a greater interest in the more serious types of music. They excelled the non-musician and poorer musician in intelligence and achievement. They also held more offices and earned more awards than non-music students. The sample used by Garder suggests that these data relate most directly to students from upper socio-economic communities and family groups.

Other characteristics of music students were reported in studies dealing with other central variables. Chin (1934), for example, reported that a strong relationship existed between the music grades of high school students (upper quartile) and the amount of out-of-school music activities. Baumann (1958) and Gernet (1939) reported on music preference characteristics of junior and senior high school students. Baumann found that ppular-commercial musical selections were most acceptable to all teen-agers without difference according

to age. Gernet found that junior high school students prefer sentimental, highly emotionalized, strongly rhythmic, distinctly melodic music in which the words contribute to the total effect. Changes in preference to classical types of music was quite sporadic during these years, but increased with each successive level of maturity. Willman (1944) in a study of visual design stimuli as a source for musical themes, found that high school music students responded to such designs in a manner quite similar to the responses of composers.

Intelligence

The factor of intelligence was not given attention as a central variable in any of the research studies reviewed or abstracted. This variable in the behavior of music students, however, was given attention in a variety of studies dealing with other problems in music education. Data from these studies suggest that the factor of intelligence appears to be related somewhat to musical aptitude and musical achievement.

Wenaas (1940) reported a high relationship between scores on the Kwalwasser-Dykema test and scores in intelligence. This relationship was higher in the lower school grades but decreased somewhat with each advance in grade level. Priestly (1942) reported that pupils who scored high in pitch discrimination (Kwalwasser-Dykema Test) were superior in intelligence to those students who scored low on this pitch test. Jenkins (1960) found a marked relationship between the mental ability of high school students and musical aptitude as measured by the Drake Music Memory Test.

Garder (1953), in his study of outstanding high school musicians, reported outstanding music students as a group were superior in intelligence to poorer music students and non-music students. Colwell (1961) showed a definite relationship between intelligence and musical achievement in his comprehensive study of music achievement of students in the schools of Sioux Falls, South

Dakota. Zack (1953) and Cramer (1958) noted in their work that participants in instrumental music were significantly superior to non-participants with respect to intelligence. Rhoades (1938) reported that intelligence was the most important single factor in predicting success in instrumental music. Intelligence, however, was found by Lamp (1933) not to be an important variable in selecting a musical instrument for study.

Emotional Traits

Data on the emotional traits of music students were obtained from studies dealing with other variables pertaining to the student and the teaching-learning process in music. These data relate to description of the emotional traits of various types of music students, emotional adjustment of students, and the behavior characteristics of students classified as monotones.

Garder (1953) reported that outstanding high school male music students as a group were less stable emotionally, less objective, and less adept in personal relations than poorer music students and non-music students. Outstanding female high school music students were less restrained, less friendly, and also less adept in personal relations. The high school music subjects studied by Kaplan (1961) evidenced a high degree of self-confidence, ambitiousness, and self-assertiveness. Daniels (1934), using the Bernreuter Personality Inventory, found that students indicating a preference for the popular type of music were less neurotic, less self-sufficient, more extroverted, and more dominant than those students favoring art music. French (1962) found that freshmen high school students scoring high on the Seashore Tests of Musical Talent and the Gaston Test of Musicality projected more affective responses (TAT) than low scoring students.

Graves (1950) reported that those junior and senior high school students taking private music lessons in the sample appeared to be better adjusted than

those not involved in private study. The latter group of students showed more conflicts with the parents, especially the mother. The parents in the former group also appeared to be better adjusted. Farnsworth's (1938) work with elementary school children revealed similar findings. Subjects who were rated high in music and art ability were considered by their teachers to be significantly better adjusted than were those who received lower aesthetic ratings. Farnsworth concluded that the data gave no support to the contention that children rated high in aesthetic abilities were more abnormal than their seemingly less aesthetic counterparts.

In a study of the personality maladjustment of children classified as monotones, Ramm (1947) reported that the Rorschach Test revealed most of the subjects to be stiff and rigid, overly controlled, and lacking in spontaneity.

Interests

Four acceptable studies were found in the literature which related to student interest in music. All studies with this central variable dealt with the interests of high school students. One study was concerned with a comparison of the interests of music students and non-music students in the small high school. Two studies were concerned with the out-of-school music activities of high school students. And one study was concerned with the seeming loss of interest in music by academically talented students.

Buegel and Billings (1952), using the Kuder Preference Record, were interested in determining whether music students in small high schools had a greater interest in music than non-music students. The data obtained led to the general conclusion that a rather consistent musical interest prevailed among all students, with very little difference in interest between sexes in both the music and non-music groups. Dislike of music was not apparent in either the music group or non-music group.

The out-of-school music activities, which were assumed to indicate interest, were studied by Chin (1934) and Henry (1941). Chin was interested in the relationships between the quantity of music taken by students in high school and the amount of type of out-of-school musical activities. Students with one or two semesters of music experience did not differ significantly on any of the identified out-of-school music activities (reading music literature, attending musical performances, playing musical instruments, listening to the radio or phonograph). Those students having three or four semesters of music experience exhibited from twice as much to one third more activity in reading music literature, attending musical performances, participating in musical performances, and playing musical instruments. A strong relationship existed between the students music grades (upper quartile), preference for music in the schools, taking private music lessons, and the amount of out-of-school activities in music. No relationships were found between out-of-school activities and age, intelligence, available leisure time, or home environment.

Henry (1941), in a similar type study which covered a two-year period, found that out-of-school music activities attracted a greater portion of high school students than any of the other arts. Listening to records was the activity in which the greatest agreement was displayed between the sexes, and the time spent listening to records was noted to increase as the subjects moved from freshman to sophomore rank. Choirs were the out-of-school music performance activity in which most students participated.

In a comprehensive study to determine the reasons why academically talented students discontinued music study while in high school, Warren (1961) found that interests were only one of several factors involved in this problem. Primary reasons for discontinuing music study were found to be: (a) the demands of college preparatory courses and the content of standardized achievement

test used to determine college eligibility or entrance, (b) lack of divergency of instruction within high school music courses, (c) out-of-school conflicts between music and other activities, and (d) personality and classroom techniques of the high school music teacher.

Some information on the interests of music students also was found in the studies of Garder (1953), Von Ende (1941), and Ernst (1955). Garder reported that outstanding music students had a wider range of musical interests and greater preferences and interests in the more serious types of music. Also, outstanding male high school musicians were less masculine in their interests. Von Ende, in his survey of music in large city high schools in 1941, found that high school orchestras and bands attracted about equal numbers of students. The assumption here was that the interest in these activities was about equal. Such was not the case in terms of the findings reported in 1955 by Ernst. This investigator found that band classes attracted three-fourths of the total instrumental enrollment in large city schools. The interest of high school students, in terms of these data, seemed to have changed.

Motivation

The motivation of music students in the public schools has not received extensive attention by researchers. The only study dealing with the problem of motivation--not directly related to the motivations of students was that conducted by Gilfeather (1962). This investigation was concerned with determining whether general music classes in junior high schools in large cities provided motivation for below average adolescents. Data were obtained from study of the content, methods, and materials used in such classes. Gilfeather inferred from her analysis and evaluation of these materials that large city school systems were cognizant of meeting the needs of below-average students in general music classes, and that much concern was in evidence relative to

the motivations, methods, and materials selected as being suitable for these students. Motivational factors thought to be useful were peer approval, interest, curiosity, working for tangible rewards, and competition.

The musical environment in the home was revealed in two other studies to be a strong motivational influence. Hughes (1932) reported that the home environment had considerable influence in encouraging students to study instrumental music. Musical instruments in the home, and participation by parents in musical activities, were most important motivational factors. Amar (1958) also found that those eighth-grade students in his study who wished to participage in high school music activities had musical instruments in their homes and that music was a part, to some extent, of the family activity.

Musicality

One area of research in music education which has been given considerable attention over the years is that roughly categorized under the term "musicality." Numerous studies have reported on music ability (music aptitude and music capacity), and the aural discriminatory powers of various types of students. The relationship of musical ability to other abilities, achievements, and traits, also has been studied by several investigators. Other studies have dealt with the emergence and development of performance ability--particularly vocal and motor rhythmic abilities. The results of these studies and a synthesis of findings whenever possible are presented below under the paragraph headings Ability, Discrimination, and Performance.

Ability. Two studies were reported in the literature which dealt with the relationship of musical ability (aptitude) to other abilities. Wenaas (1940) reported a study on the relationship of musical ability to intelligence, scholarship, and personality. Although a positive correlation was found to exist between musical ability as measured by the Kwalwasser-Dykema test,

intelligence, scholarship, and certain personality factors, the correlations were not considered high enough to be of significantly true predictive value for determining success in musical accomplishment. Jenkins (1960), in a similar type of study using high school students as subjects, found a marked relationship between music aptitude and mental ability, but only a slight positive correlation between music aptitude and scientific aptitude.

The relationship of musical ability to success or achievement on various musical instruments was given attention in the studies of Lamp and Keys (1935) and Colwell (1961). Lamp and Keys reported that neither pitch perception nor tonal memory, as measured by the Seashore Tests, afforded an index of aptitude for brass, woodwind, or string instruments which was adequate for individual guidance. Colwell found that the instrumental and piano students in his sample consistently achieved higher scores on the Knuth and Aliferis Tests, but that musical aptitude did not prove to be as important as other factors in predicting achievement.

The problem of the possible relationship between auditory acuity and musical ability was investigated by Farnsworth (1938). Acuity values for the 110 elementary school students (grades one to four) used in the study were obtained from a specially constructed audiometer. The data obtained revealed that auditory acuity was not related to the musical ability of the students used in the study.

The relationship of musical aptitude to children of different national and racial origins was investigated by Luke (1939). The subjects used (493 seventh grade students) represented children of northern European, Chinese, Japanese, Italian, and Portugese-Spanish descent. The Drake Test of Musical Memory, Oregon Discrimination Test, and the pitch and tonal memory tests of the Seashore battery were administered to the subjects. Luke found that greater variability existed within each national group than between the groups.

Differences between boys and girls for all national groups were very small except in the case of Italian girls. Comparable Japanese, North European, and Portugese-Spanish children appeared equally endowed in basic musical traits.

Wheeler and Wheeler (1933) compared the musical aptitude of mountain children (grades five to eight) in East Tennessee as measured by the Seashore Tests with the results of ten other investigations with other subjects using the same test. They reported that while the mountain children scored slightly below the Seashore norms, their scores as a group, were above those found by most investigators using non-mountain children as subjects. Negro children in one study seemed to be superior to the mountain children.

Shephard (1942) conducted a study to determine whether non-verbal differences existed between groups of urban and rural children. The Kwalwasser-Dykema test was used with 104 pairs of subjects. Shephard concluded that while an indication of rural superiority seemed to exist in musical ability, the difference between means was not statistically significant.

The possible contribution of various factors to musical ability was investigated by Amar (1958). Musical ability was determined through scores on the Drake Music Memory Test and ratings of teachers. Subjects in the study were 250 eighth grade students in seven Chicago elementary schools. Amar reported that more than twice as many students in the high group as in the low group in musical ability reported that there were musical instruments in the home, and that they played instruments, studied music, planned to participate in musical organizations in high school, and chose music as a preferred hobby.

Several studies have been devoted to the reliability of standardized tests of musical aptitude. Friend (1930) reported that the Seashore Tests were reliable for kindergarten children. In a later study, Friend (1939) found a positive but very low correlation between parents ratings of their child's musical ability and scores on the Seashore tests. Stanton and Koerth (1933),

in their study of scores on the Seashore Battery administered to the same subjects at three year intervals, reported a gradual rise in the percentage of non-fluctuation in scores as the educational level rose. Regardless of the length of time of music study, the mean increase in test scores decreased with educational progress. Gordon (1958) was interested in determining whether scores on the Drake Musical Aptitude Tests were affected by training and practice. Gordon concluded that the Drake Musical Aptitude Tests could be considered tests of musical aptitude and not tests of musical achievement. Wilson (1960) analyzed and compared listening instruments (tests) in music and language listening, and then compared the results of these tests when given to sixth grade children. The following tests were used: Whistler-Thorpe Musical Aptitude Test, Sequential Test of Educational Progress, Language Listening Test, the Gaston of Musicality, and the Kyme Test of Aesthetic Judgement. The correlations between language listening and music listening scores were found to be relatively close. Wilson concluded that a considerable portion of the Whistler-Thorpe and Gaston Test of Musicality are taken up by language listening material and, since this material is representative of material included in language listening tests, it perhaps operates as an adulterant of validity.

Farnsworth (1938) sought to determine the relationship, if any, between musical ability, art ability, and abnormalities. Fourth grade students numbering 1269 were used as subjects in this work. Teacher ratings were the means of obtaining data. Analysis revealed that the data gave no support to the contention that children rated high in aesthetic abilities were more abnormal or defective in speech than their less aesthetic counterparts.

Jersild and Bienstock (1935) and Sievers (1932) studied the rhythmic development and performance of children. Jersild and Bienstock were interested in the ability of young children to keep time to music. The children used in

the study (94) ranged from three to five years in age. Findings from this work, which would seem to be most significant for music education, were that young children were better able to keep time to music played at faster tempos, and little difference existed in beating time with the hands and marching in rhythm to the music. Sievers (1932) in his work on the rhythmic performance of elementary school children found that all subjects who passed his rhythm test gave accents to all rhythmic patterns with unequal time divisions, and that there appeared to be one preferred grouping and accent for each pattern. Sievers concluded that the nature of the grouping seemed to depend on the configuration of the entire pattern, the accent, and the relative position of long and short notes.

Problems relating to the aesthetic sensitivity of various types of students were investigated by Willman (1944), Parker (1961), and French (1962). Willman was interested in determining whether visual design stimuli would suggest to high school musicians themes with characteristics similar to those suggested to composers by the same stimuli. Willman reported that student's responses and the general characteristics of their musical responses were quite similar to those of the composers. The possible relationship of aesthetic sensitivity to musical ability, intelligence, and socio-economic status was investigated by Parker (1961). Major conclusions to this work were that only a moderate relationship seemed to exist between aesthetic sensitivity and musical ability when intelligence and socio-economic status were held constant, and any relationship between aesthetic sensitivity and socio-economic status was negligible. French (1962) studied the relationship of musical ability as measured by the Seashore Tests of Musical Talents and the Gaston Test of Musicality and the responses of ninth grade students to four items on the TAT test. The results of this work revealed that students scoring high on the music tests

projected more affective responses to the TAT items than did those students scoring low on the music tests. This difference was significant at the .02 level of confidence.

Kyme (1956), in a study of the relationships of aesthetic judgements to music capacity, reported that aesthetic judgements could be used to differentiate between persons known to be musical and persons observed to be less musical. These results, Kyme believed, gave some evidence that the best predictor of musical behavior must be based on observations of the individual in many musical situations, and that the act of appreciation (the assessment of music at its true value by the individual in the light of his experience) was worthy of more consideration than it had been given in predicting musical behavior.

Discrimination. The pitch discrimination and certain characteristics of a group of fifth, seventh, and ninth grade students were investigated by Priestly (1942). The Kwalwasser-Dykema Pitch Discrimination Test was used in this study. From a sample of 3439 students, Priestly selected as subjects the thirty-six students scoring highest, and the thirty-six students scoring lowest on this test. A comparison of these students in terms of specified characteristics revealed the following: (a) students scoring highest on the Kwalwasser-Dykema test were superior in intelligence, academic achievement, and musical achievement, (b) the socio-economic status of the students scoring highest on the Kwalwasser-Dykema test was slightly higher than those in the low scoring group, and (c) little relationship was found between motor skill and musical performance of the students in either the high or low group in terms of scores on the Kwalwasser-Dykema Test. The auditory acuity of the students was not believed to be a factor in the pitch discrimination ability of these students. This latter conclusion seems to be in agreement with that reported by Farnsworth (1938).

Hartzell (1949) gave attention in his work to the tonal apprehension and tonal memory abilities of elementary school children (primary grades). The extent of these abilities was determined through the singing of familiar songs and dictated musical tone groups. Hartzell reported that (a) a significant but moderate correlation existed between tonal apprehension and tonal memory when the latter was tested by the ability to remember the specific melodies of familiar songs, (b) a statistically significant correlation existed when tonal memory was tested by the immediate recall of dictated tonal materials, (c) intonation errors were made more frequently on ascending intervals than on any other tonal sequence, and (d) ascending fourths, fifths, minor sixths, minor sevenths, and descending fourths, fifths, minor sixths, and major thirds were found to be the most difficult intervals for primary grade pupils. A major conclusion of this work was that children with superior ability in tonal apprehension evidenced a gradual advance in precision and accuracy in singing concomitant with chronological development.

In an attempt to find an efficient method for teaching aural discrimination of pitch to children of kindergarten age, Jeffrey (1958) constructed a two tape recorder apparatus. While one played music, the other produced a pair of piano pitches at 1,024 cycles difference and another pair at 128 cycles difference. A correct response concerning these intervals was made by pressing one of two buttons which permitted the music to continue. An incorrect response stopped the music. He found that pre-training in matching the given pitches vocally and on the piano facilitated learning. He also found that going from a wide difference in interval extremities to a narrow difference was not facilitative.

A study by Streep (1931) was conducted to determine whether differences existed in the senses of rhythm and consonance of white and Negro children. Subjects (678 Negro, 638 white) were students in the third through the sixth

grade from comparable environmental backgrounds. The Seashore Rhythm and Consonance Test was used as the data gathering tool. Streep reported that the Negro students achieved a slight superiority over the white students in the two musical areas investigated, but that this difference may have been due to differences in maturity between the groups.

Performance. Studies considered under this category were concerned with the development of vocal and rhythmic abilities and the relationships of various abilities to the prediction of success in instrumental music.

Two studies were found in the literature which dealt with the vocal or singing development of students. Jersild and Bienstock (1934) were interested in determining the vocal range (maximum range, no attempt made to determine useable range) of young children, ages two years through ten years. These investigators reported that (a) a person realizes a large portion of his potential pitch range while still in the first three grades of elementary school--especially girls, and (b) ninety-nine percent of the tones in the vocal range occur within the range from first line E to fourth space E of the treble clef. An implication drawn from these results was that it would be profitable to emphasize vocal training in the lower school grades.

The relationship between vocal growth in the adolescent and the total growth process was investigated by Joseph (1959). Results of this study revealed that both before and after the onset of puberty, as age and overall size of body structure increased, voice range lowered, and before fifteen years and four months, development patterns were less clearly discernable than from that age onward. The distribution of the low terminal pitch for both sexes was found to center around the F-sharp of their respective ranges. Highest terminal pitch was found, in all except four cases, to be related to the low terminal pitch in that both were overtones of a harmonic series built upon a fundamental tone one octave below the low terminal pitch.

Studies relating to motor performance were conducted by Priestly (1942) and Williams (1933). Priestly found little relationship between the motor skill and musical performance of a group of fifth, seventh, and ninth grade students. Williams was interested in the reliability of the Sievers modification of the R. H. Seashore test for motor rhythm. This investigator retested a group of 100 elementary school children after a fifteen-month interval of time. Williams reported only a moderate falling-off in reliability over a fifteen-month interval when identical tests were used. The test thus was considered to be a reliable instrument for predicting motor-rhythm response. The need, however, for validation against performance in functional musical situations was recommended by the investigator.

Factors involved in the prediction of success in instrumental music performance have been given attention by several investigators. Lamp (1933) was concerned with the problem of determining aptitude for specific musical instruments. Musical ability, intelligence, teeth and finger measurements, were the variables considered as possibly relevant factors in predicting instrument selection. Lamp reported that neither intelligence nor physical characteristics yielded valid data for use in selection of specific instruments. Eveness of teeth and finger taper showed no significance for any of the types of instrumental performance investigated. The controlled try-out method (experimentation by students with the different types of instruments) proved to be the most suitable technique for determining instrumental aptitude.

In a later study, Lamp and Keys (1935) reported that neither pitch nor tonal memory, as measured by the Seashore Tests, afforded an index for aptitude for brass, woodwind, or stringed instruments which was adequate for individual prediction. A combination of scores on pitch discrimination, tonal memory, and I.Q. was found to predict performance on brass instruments sufficiently

well (r.58) to be of some assistance in guidance, but no combination of scores obtained served to forecast success on clarinet or violin with correlations higher than .42.

Rhoades (1938), in a similar study using seventh grade students as subjects, reported that a combination of the Seashore Pitch Test, the Terman I.Q., and a record of musical achievement proved to predict success in instrumental music to a relatively high degree. The I.Q. score was observed to be the most significant factor in predicting success in instrumental music.

Manor (1950) studied, in addition to those variables included in the studies of Lamp and Keys and Rhoades, the factors of achievement in tonette and adaption classes for prospective instrumental students. Manor's conclusion to this study was that although the measures obtained might be helpful in a guidance program, rigid differential individual guidance could not be justified on the basis of the results obtained in this study.

Personality

Research studies pertaining to the personality of various types of music students in the public schools were concerned with (a) personality traits and musical preferences, (b) emotional conflicts of music and non-music students, (c) personality of high school instrumentalists and achievement in high school music, and (d) personality maladjustment in children classified as monotones.

In a study to discover the relationships between certain personality traits and musical preferences, Daniels (1934) used the Bernreuter Personality Inventory and a questionnaire with an incoming freshman class at a university to study this problem. Slight but positive relationships were found between musical preferences and personality characteristics. The group favoring popular music tended to be less neurotic, less self-sufficient, more extroverted, and more dominant than the group favoring art music. Individual preferences

for popular and art music, however, were factors relatively independent of personality. From these data Daniels concluded that the basis of individual preferences must be sought elsewhere, either in environmental factors or in inherent physiological and psychological factors, or in both.

Graves (1950) studied the emotional conflicts of paired junior and senior high school students who were taking private music lessons and who were not taking music lessons. The data obtained revealed that the group taking private lessons seemed to have a better opinion of both parents than the group not taking private music lessons. The group not taking private lessons showed more conflict with the parents, particularly the mother. Both parents of the students in the music group seemed more satisfied with their present occupation than did the parents of the group not taking music lessons.

The relationship between certain personality characteristics and achievement in instrumental (band) music was investigated by Kaplan (1961). Evidence was found that certain personality characteristics were associated with students who studied music, who played a specific type of instrument, and with the relative degree of achievement attained in the study of band instruments. Music students revealed a higher degree of musical interest, self-confidence, ambitiousness, and self-assertiveness, than non-music students.

Ramm (1947), in a study of personality maladjustment of children classified as monotones, reported that on all tests used the social and emotional development of the children was inadequate. This was especially true of the findings on the Rorschach test. This test revealed most of the subjects to be stiff and rigid, overly controlled, and lacking in spontaneity.

In a study devoted to the relationships between musical ability and other factors, Wenaas (1940) reported no significant correlations between scores on the Kwalwasser-Dykema Test and personality factors.

Values

The majority of studies relating to the values or value systems held by school students were concerned with musical preferences or musical tastes and the factors which may influence these preferences. The variables dealt with included environmental influences, age and grade level, and the socio-economic status of students. Other studies dealt with the relationship of musical taste to musical capacity and preferences for the band or orchestra as an aesthetic medium. Study has not been given to other types of values which may influence the behavior of music students.

The earliest study devoted to the problem of environmental influences on taste or preference was conducted by Hughes (1932). This investigator was concerned primarily with environmental factors influencing the preferences of junior high school students. It was found that emphasis by the schools on certain areas of music generally resulted in preferences for these areas, and that the home had considerable influence in encouraging the subject to study instrumental music. The greatest part of the musical background observed in the subjects was acquired through the school.

Another study reporting on environmental influences was that of Wiebe (1940). This research was concerned with the effect of song "plugging" on the music preferences of high school students. Wiebe concluded that "plugging" did not affect the ratings of initially "more liked songs," but that it did affect the ratings of originally "less well-liked songs." These songs, when "plugged," increased slightly in preference. No observed difference was found in the effectiveness of "plugging" for radio enthusiasts as against casual listeners.

Farnsworth (1934), in a study of the familiarity of high school and college students with the names of musicians, reported a uniformity of response

which extended from the freshman year in high school through the college years. Farnsworth concluded that, presumably, the environment produced considerable uniformity in this type of musical response.

Gernet (1939), in a study which was planned to ascertain the influence of age and grade level on musical preferences, reported an inconsistent but significant change toward classical music at successive levels of maturity. The change was sporadic between the ages of twelve to seventeen but showed an accelerated increase in the college years. The adolescent, especially of junior high school years, prefers sentimental, highly emotionalized, strongly rhythmic, distinctly melodic music in which words contribute to the total effect. No relation was found between music preference and sex or intelligence, but some relationship seemed to exist with musical aptitude.

The study of Daniels (1934), which used the Bernreuter Personality Inventory in investigating personality traits and music likes and dislikes, revealed slight but positive relationships between musical preferences and personality characteristics. Subjects indicating a preference for popular music were found to be less neurotic, less self-sufficient, more extroverted, and more dominant than the group favoring art music.

In a comprehensive study of the musical preferences and socio-economic status of students in grades seven through fourteen, Baumann (1958) reported statistically significant differences in the music preferences of high and low socio-economic groups for some kinds of music. The difference was in the degree of preference, and not in one group accepting a kind of music rejected by the other group. These data also revealed that regardless of the amount and type of music courses taken, popular-commercial music selections were most acceptable to all teen-agers, without difference according to age, socio-economic class, or sex.

A study by Fisher (1951) was concerned with determining whether differences

in preferences were specifically learned reactions to specific compositions, or a more generalized kind of difference defined in broad frames of reference. Subjects used in the study included students from the sixth and tenth grades of the public school and college students. Classical music preference differences between age, sex, or socio-economic status, were found to be largely a function of the transmission of specific judgements about specific compositions. Subjects from unskilled lower economic status groups did not differ in reaction to music from subjects from the professional upper status groups. Reactions of the sixth grade students were not markedly different from those of college students.

Sell (1950), using 144 high school students as subjects, was interested in discovering whether high school students had an aesthetic tonal preference for music played by bands or orchestras. The subjects were asked to state their preferences after listening to five recorded exerpts played by both a college band and a professional orchestra. Sell reported that there seemed to be an aesthetic tonal preference for music played by an orchestra rather than that played by a band. This finding suggested to this investigator that reasons other than aesthetic tonal preferences were responsible for the decline of orchestras in the public schools.

Social Factors

The social activities and behaviors of the student within and outside of the school environment, and his socio-economic background are believed to contribute, directly or indirectly, to his behavior in the teaching-learning process. Knowledges of the types of social activities the student accepts, the social behaviors he develops, his socio-economic status, and how these might affect him as a person and a learner in music, are considered necessary knowledges in understanding the teaching-learning process in music. Very little re-

search effort, however, has been given to problems dealing with these aspects of the students life.

School Activities

Research dealing directly with the social activities and behaviors of the music student in the public school is non-existent. Only one study was found which provided any data on this topic. This study, by Garder (1953), was concerned with identifying the characteristics of outstanding high school musicians. Two of the characteristics identified in this study, by inference, related to the social activities and behaviors of outstanding music students. Garder reported that outstanding high school musicians hold more offices and earn more awards than non-music students. It can be inferred from these data that these students were more active in social activities than the non-music students.

Social Status

Competent studies on the social status, or the socio-economic status of music students, were reported by four investigators during the years 1930-1962. These studies were devoted to the relationships of socio-economic status to participation in instrumental music, preferences in music, and aesthetic sensitivity.

Zack (1953) was interested in the relationship between participation in high school instrumental music and socio-economic status. Results of this investigation revealed that no significant association existed between participation and socio-economic status, religion, family size, and nationality background. Also, no significant association could be found between student dropouts and these factors.

The possible relationship of socio-economic status and music preferences

was given attention by two investigators. Baumann (1958) found significant differences in the music preferences of high and low socio-economic groups for some kinds of music. The difference, however, was in degree of preference, and not in one group accepting a kind of music rejected by the other group. Popular-commercial music selections were most acceptable to all teen-agers, without difference to socio-economic class. Fisher (1951) used subjects from the sixth grade, tenth grade, and college level in studying this possible relationship. The results of this work revealed that subjects who came from unskilled lower economic status groups did not differ in reactions to music from subjects who came from the professional upper status group. Reactions of the sixth grade group were not markedly different from those of the college students. Fisher concluded that classical music preference difference between age, sex, or socio-economic status groups, was largely a function of the transmission of specific judgments about specific compositions rather than to broad frames of reference going beyond specific compositions.

One study was reported which was concerned with the possible relationship of aesthetic sensitivity to musical ability, intelligence, and socio-economic status. Parker (1961) in this study used 1074 high school students as subjects and gathered data through use of the Wing Test of Musical Ability and Appreciation, The Gaston Test of Musicality, and the Warner Occupational Rating Scale. Parker reported that only a moderate relationship existed between aesthetic sensitivity and musical ability when intelligence and socio-economic status were held constant. Relationships between aesthetic sensitivity and socio-economic status were found to be negligible.

Education

Research relating to the education of the music student is concerned primarily with achievement and participation in school activities and the factors

which may affect these behaviors, and with the relationships of non-school educational activities to those activities provided in the school. Studies of these types provide information which help further to identify and characterize the music student as a person and to indicate possible relationships between in-school and out-of-school educational activities.

School Experiences

Two aspects of the music students' school experiences which have been identified and investigated to some extent are the relationship of achievement to other factors and the type and extent of participation in school music activities.

Achievement. The most comprehensive study found in the research literature on achievement in music was conducted by Colwell (1961). In this study, Colwell investigated the music achievement of 3860 students in grades five through twelve in the schools of Sioux Falls, South Dakota. Comparisons were made between instrumental and vocal music students on the basis of academic grades, intelligence, and scores on the Foss and Knuth Achievement Tests, Farnum Music Notation Test, Aliferis Test, and the Watkins-Farnum Performance scales. Data obtained revealed a definite relationship between academic average, music grade average, musical aptitude, intelligence, and musical achievement. Instrumental students, as a group, had the higher grade averages, intelligence quotients, and musical aptitude scores. Vocal students with piano training scored higher than those vocal students without piano experience. Colwell concluded that musical aptitude did not prove to be as important as other factors (intelligence, academic grades) in predicting achievement.

Lease (1959) studied the differences between instrumentalists and vocalists in intelligence, musicality, and music achievement. Three hundred high school seniors were used as subjects. The Seashore Measures of Musical Talent,

Kwalwasser-Dykema Test, Drake Musical Memory Test, and the School College Ability Test (SCAT), were used to obtain data. Lease reported that the instrumentals, as a group, scored higher than the vocalists on the quantitative section of the SCAT Test, and that they were found to be superior on the Seashore pitch and tonal memory tests, the Kwalwasser-Dykema Rhythm and Tonal Memory test, the Drake Musical Memory Test, and the Kwalwasser-Dykema Test of musical accomplishment. Priestly (1942) also reported that pupils high in pitch discrimination ability were superior in academic achievement.

Franks (1958) was interested in determining the extent to which success in high school could be predicted from junior high school grades. Franks reported that junior high grades were better predictors for achievement in foreign language, music, and art, than reading or intelligence test scores. For predicting boys' high school music grades, the most important factors were: junior high school industrial arts grades, reading comprehension test scores, and junior high language-arts grades. For predicting girls' high school music grades, the best predictors were junior high school social studies grades, home economics grades, and intelligence test scores. Wenaas (1940), in a study dealing with another central variable, also reported a positive relationship between grades in school and musical achievement.

The role of music grades in affecting the amount of out-of-school music activity of high school students was studied by Chin (1934). The data obtained in this study showed a strong relationship between music grades (upper quartile) and the amount of out-of-school music activity.

The relation of maturation to achievement in beginning instrumental music performance was investigated by Cramer (1958). Students (sixty-eight) in the fourth through the eighth grade who were beginners on string, woodwind, and brass instruments were used as subjects. The data obtained by Cramer revealed that successful achievement in instrumental music performance at the fourth

grade level was significantly influenced by the motor development of the individual student. The hypothesis, however, that achievement in beginning instrumental music performance at the fourth through the eighth grade level correlates significantly with physical growth was rejected. The seventh grade level was indicated to be the time when optimum maturational conditions were present for beginning the purposeful study of instrumental music if successful performance is a primary objective. Successful performance in instrumental music also was found to be accompanied by high standing in intelligence, pitch discrimination, rhythmic discrimination, tonal memory, and personality adjustment.

Participation. Studies on participation in school music activities fall roughly into two groups: (1) those reporting on the number of students enrolled in music activities, and (2) those concerned with the extent of participation by academically talented students in music activities, and the reasons for lack of participation by students of this type.

Two studies, each concerned with comparative enrollments in school bands and orchestras, were found in the literature. Von Ende (1941), in a survey of music in large city high schools, found that high school orchestras and bands attracted about equal numbers of students. Ernst (1955) found in 1955, however, that band classes attracted three-fourths of the total instrumental enrollment in large city schools. That this trend in instrumental music enrollments has continued is a belief of most music educators.

Cucci (1955) investigated the factors which seemed to influence musical participation among high school students. Music students in twenty-four high schools in the state of Illinois provided data for the study. Cucci reported that the number of periods in the school day, coordination between elementary and secondary school music education programs, and the existence of community

music groups appeared to be positively related to the percentage of high school students participating in musical activities. Factors found to have little or no apparent relationship to the percentage of students participating in musical activities were: sex of teacher, amount of credit given for music activities, awards, summer band programs, restrictions on participation, utilization of student section leaders, social events for music students, booster clubs, publicity for performance groups, fees, guidance service, and practices in the elementary school program.

The investigations of Stene (1961) and Warren (1961) were concerned with the musical participation of academically talented students. Stene was interested in the extent of participation in choral music classes offered to California junior high school pupils participating in accelerated academic programs. Data were obtained from fifty-two junior high schools having a total enrollment of 40,000 or more students. Stene reported that election of one choral music class was permitted in these schools in terms of the following percentages: seventh grade, seventy-five percent of the schools; eighth grade, eighty-five percent of the schools; ninth grade, ninety-one percent of the schools. The percentage of students in the accelerated academic program electing one music class was reported as follows: seventh grade, twenty-two percent ; eighth grade, twenty-nine percent; and ninth grade, twenty percent. A much smaller percentage (6.3 to 10.4) of the schools permitted election of two music classes; and a smaller number of students (1.2 to 1.6 percent) enrolled for two classes in music.

Warren (1961) in a comprehensive study to determine the reasons why academically talented students discontinued music study while in high school, found the following factors responsible: (a) demands of college preparatory courses and the contents of standardized achievement tests used to determine college eligibility or entrance, (b) lack of divergency of instruction within high

school music courses, (c) out-of-school conflicts between music and other activities, and (d) personality and classroom techniques of the high school music teacher.

Non-School Experiences

The non-school educational and musical experiences of music students have not been given attention in the research literature. Only one research report was found which related to activities of these kinds. This study, by Robins (1959), was concerned with the private piano backgrounds of high school students. Data were obtained from 1128 high school students participating in school music organizations. Results of the study revealed that a large majority of the students taking private piano lessons were enrolled in only one school-sponsored musical organization, and that a high percentage of these students had experience in private music study other than the piano. Robins concluded that private piano lessons were not a major influence on later vocal and/or instrumental study.

Post-High School Activities

It is usually assumed by music educators that the music experiences provided in the school will carry over in some fashion into adult life. It is further assumed that high school musicians will be active participants in the musical life of a community. To what extent do high school musicians participate in music after graduation, and what effect does study and participation in high school seem to have on adult participation? These are the types of questions of research interest in this sub-category on the student. Answers to such questions give additional information on the student and, as importantly, on the possible influence of the music program in the schools.

Unfortunately, only two studies relating to this area were found in the

research literature. Neal (1948) studied the relationships between high school music training and actual music participation in adult life. Data were obtained from 269 replies to a questionnaire sent to persons who had participated for two or more years in high school music organizations. The respondents had graduated from high school nine to twelve years earlier. Neal reported that the data obtained suggested that a significant amount of carry-over occurred between participation in musical organizations in high school and participation in adult life. Very little difference was found between respondents owning or not owning their musical instruments while in high school and their continuation of musical participation in adult life. The amount of training while in high school had no significant bearing on the amount of time devoted to music listening or participation in adult life.

Falkner (1957) was interested in finding some tangible evidence which would explain the relationship between the adult's interest in music and association with music while a student in the public school. Interviews were conducted with 431 adults. Data obtained through the interviews revealed that the adults currently participating in musical activities began music study at an average age of nine years, had studied for an average of four years, and the majority had been active in at least two musical activities while in high school. Of the group not currently participating in musical activities, the instrument played in high school was most often selected by the instrumental music teacher, and the person generally was not satisifed with the instrument. Falkner also reported that the quality of musical experiences was directly proportional to the interest shown in later years. This suggested to Falkner that music teachers should foster situations in which emotional reactions to music could occur.

CHAPTER VII

RESEARCH RELATING TO THE TEACHING-LEARNING PROCESS IN MUSIC

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RESEARCH RELATING TO THE TEACHING-LEARNING PROCESS IN MUSIC

Research studies on the teaching-learning process in music which were evaluated and judged to be both relevant to music education and competent as research are reviewed in this chapter. Relevant research here would be that concerned with (a) the objectives, knowledges, methods, techniques, and skills involved on the part of both the teacher and student in various school musical activities, and (b) the role, evaluation, and influence of such factors on the effectiveness of the teaching-learning process in music.

Reviews of such studies and syntheses of the information (when possible) are presented under four major headings. First, attention is given to those studies relating to the transmission of the culture--the transmission of knowledges in the areas of music history, literature, and theory of music. Second, research on the acculturation of the individual is reviewed. Acculturation is considered in terms of the individual's acquisition of the perceptual skills of listening to, or reading music, and the acquisition of the expressive skills of composing, playing music, or singing. The third major heading, aesthetic sensitivity, includes research on the development of musical taste. The classification title of undifferentiated concepts was given to the fourth major heading. Reviewed here are those studies which do not relate specifically to any one of the above objectives, but rather deal in toto with the teaching-learning process in specific instructional areas or with the role and influence of programs and curricula on the process.

Transmission of the Culture

A total of sixteen studies were found in the research literature which

provided some information on the transmission of the cultural heritage in music. Of this number, five studies were concerned with various aspects of musical literature and its appropriateness for use in the school music curriculum, four studies dealt with various methods of presenting music literature in the classroom setting, and two studies were concerned with the development of tests to evaluate student appreciation of music. Five studies were classified as dealing with the transmission of knowledges in the theory of music. No relevant or competent studies were found which pertained to the transmission of knowledge about the history of music.

Literature

The research studies reviewed which were concerned with musical literature per se dealt with the selection, nature, or adaptation possibilities of certain types of literature for use in the public schools. The five studies of this type were devoted to investigations of music literature for elementary school music classes, high school vocal music activities, brass ensembles, and the high school orchestra. They deal, for the most part, with only small parts of the literature problems in these areas of instruction. Noticeably lacking are studies on literature for the junior high school choral and general music class, and literature for the band at all instructional levels.

Shull (1961) studied children's song literature composed by distinguished nineteenth and twentieth century composers to discover the nature of the music being written for children's voices, and the possible reasons why much of this literature was not included in elementary school music texts. The songs of the selected composers were found to have the following characteristics: they were subtle in musical expression, avoiding the most obvious formal structure; they represented a variety of styles from very traditional to those in twentieth century idioms; texts were obtained from original, folk, and

anonymous sources; texts were nationalistic, comical, religious, and sentimental. Shull offered the following possible reasons for exclusion of these songs from graded music series: (a) range requirements, (b) extended periods in high or low tessituras, (c) fragmentary melodies, (d) difficulty of accompaniments, (e) obvious intent for church use, (f) difficulty of text translations, and (g) ownership of publication rights.

The studies of Livingstone (1957) and Theno (1954) were concerned with the selection of specific types of choral music for use in high school choral activities. Livingstone studied English madrigals for the purpose of selecting those suitable for use in the high school choral program. The selection criteria dealt with the problems of high school student voice range, tessitura, and the appropriateness of the text for students of this age group. Eighty-seven madrigals by twenty-five composers of the English madrigal school were identified as being suitable for use in the high school music program. Theno (1954), in a similar study, analyzed the choral works of Orlando Di Lasso to ascertain which of these compositions would be suitable for average high school choral groups. The selected compositions which met the stated criteria were edited and information was presented on the mode, meter, type of choral group for which best suited, range and tessitura, accompaniment, language of the text, style, mood, textual content, tempo and approximate performance time, and difficulty of each composition.

Utgaard (1949) conducted an analysis of the teaching content found in ensemble music (562 compositions) written for brass wind instruments, namely, French horn quartet, trombone trio and quartet, brass sextet, and brass choir. He concluded that contrapuntal writing was not well represented in the easier grades of music. Structural styles were fairly evenly distributed throughout all the music examined, except that a strict basic chordal style was not found in the most difficult grades of music. The percentage of contrapuntal writing

increased as the level of difficulty increased.

Buebendorf (1947) established criteria in terms of the capabilities of school musicians for selecting music for school orchestras. The criteria were developed from published sources and interviews with music educators. In terms of these criteria, Buebendorf selected twenty-five symphonies of the classic period (1760-1800) which were believed to be suitable for adaptation and use by school musicians.

The research providing information on methods of presenting music literature utilized students in the secondary schools. At the junior high school level, Bodie (1958) and Nash (1962) investigated student reaction to music listening experiences. Bodie compared the results of thematic music memory tests taken from listening experiences with and without the use of program notes. The results of the study revealed that a majority of the students (seventh grade) preferred program notes, yet the students' ability to recognize musical themes, whether presented with or without program notes, was not enhanced.

The study by Nash (1962), while conducted to determine which of several types of music was most appealing to junior high school students, also sought to determine student responses to different methods of presenting recorded music. It was concluded that the type of presentation had little effect on student enjoyment of music. The students preferred musical comedy and folk music to operatic or orchestral music. Lively orchestral music in the classic tradition increased in enjoyment upon repetition of the same type of music, whereas, the enjoyment of slow orchestral music in the romantic tradition decreased upon repetition. Increase in grade level appeared to bring a corresponding decrease in enjoyment for the types of music presented in this study.

Keston (1954) developed tests of musical preference and music recognition

in order to evaluate the efficiency of two methods of teaching music appreciat the high school level. The groups tested were the experimental group which listened, heard explanatory comments, and discussed the music; a control group listened to music without comments or discussion; and a zero control group received no instruction. The experimental method was found to produce superior results.

Tests to evaluate student appreciation of music were constructed by Hevner (1931) and Fisher (1949). Hevner employed a mutation technique in developing an objective test for the appreciation of the beautiful in music. Compositions by well-known composers were altered, and both the original and altered versions were performed for the subjects who were instructed to select the preferred version. Fisher's test consisted of six sub-tests, namely: mood, imagery, association, rhythm, instrumental timbre, and factual knowledge. After appropriate revision, the test was administered to more than 1,000 students from the seventh grade through college. The validity coefficient was determined through a comparison of test scores with extent of musical experience and was reported to be +.82. The reliability coefficient ranged from +.93 to +.96. The results of the test produced a coefficient of correlation with intelligence test scores of +.62, ±.02.

Theory

Five studies were found in the research literature which were concerned with the transmission and acquisition of theoretical knowledges of music. With one exception, these studies dealt with experimental approaches to methods of teaching and the effect of these methods on student achievement. Four of these studies pertained to this process at the elementary school level. The fifth was devoted to the development and evaluation of a radio course in music at the secondary school level.

Silverman (1954) investigated the value of class piano instruction in the music education program in grades three and four. An experimental group of 362 students received class piano instruction as a part of the total music instructional program, while a control group of 362 students did not receive keyboard instruction. The Providence Inventory Test in Music was employed to measure the students' musical achievement both at the beginning and end of the ten-week (fifty lessons) experimental period. Results indicated that both groups gained significantly in musical achievement, but that the difference in gains between the two methods of instruction was not statistically significant.

Nelson (Carl B., 1954) conducted an experiment to evaluate two methods of teaching music in the fourth and fifth grades. The experimental instruction involved a combination vocal-instrumental approach while the control group received vocal instruction only. No significant differences were found between the two groups with respect to measurement by the researcher's audio-visual musical discrimination test; however, data yielded by the Keston Music Preference Test revealed a significant difference between the groups favoring the experimental approach at both the fourth and fifth grade levels. In a follow-up study one year later, Nelson (1956) found that the experimental group was significantly better than the control group with respect to the criteria of knowledge of musical notation. A second difference with respect to the original experiment was the observation that the sixth grade experimental group was significantly more capable in audio-visual musical discrimination than the control group.

Another study designed to determine the relative effectiveness of two approaches to music instruction in grades three through seven was conducted by the Pittsburgh Public Schools (1936). This study involved 626 students. The experimental groups received one-half instrumental instruction and one-half vocal instruction while the control groups received the conventional type of

instruction for these grades--group singing. At the end of the six-month experimental period, it was concluded that the groups did not differ significantly in achievement as measured on the Kelsey and the Kwalwasser-Ruch tests of musical achievement and accomplishment, a sight reading test, and a rhythm and rhythm notation test constructed by Earhart and Gatto.

Smiley (1955) analyzed the contents of four frequently used fourth grade music textbooks to determine the type, amount, and use of musical configurations, symbols, terms, and words having musical connotations. This analysis revealed that extensive use was made of tonic chord arpeggios and scale passages. The use of dominant and subdominant chord progressions (in arpeggiated melody) was next in frequency of use while very sparing use was made of chromatics and the minor tonality. Every text analyzed contained at least one song in each of the major keys having from none to four sharps or flats; signatures with less than four sharps or flats tended to occur most often. Of the forty-five foreign music terms used in the four textbooks, only three terms were common to all. This fact indicated a lack of agreement among the tests as to appropriate minimum vocabulary. It was concluded that many words used in the books were not familiar or meaningful to fourth grade students, especially when the words had both a conventional and a uniquely musical meaning.

Sur (1940) developed and evaluated a radio course designed to teach musical knowledges and appreciation to students in grades nine through twelve. All participating students were tested both before and after the experimental period. The results of the experimentation revealed that the radio lessons were effective and interesting to the students and a statistically significant gain in knowledge occurred in all groups of students involved in the experiment. There was no significant difference, however, between student gains in achievement by the radio lessons and gains by the traditional classroom method. Sub-

jects who had studied music in performance areas did not perform better on the tests than non-performers.

One additional study, which is reported in a later section of this chapter, has some relevance here. Swanson (1959), in a study primarily concerned with an investigation of adolescent male voice mutation, reported that during a nine-month experimental period on all-male general music class showed gains in musical knowledges which were decidedly above those made by a control class (boys and girls). The variable here was the class organization--boys separated from the girls. This study will be reviewed in greater detail on a following page.

Acculturation of the Individual

A total of forty-eight studies were reviewed which were found to be investigations related to the acculturation of the individual. Eleven of the studies dealt with the perceptual skills of music listening, twelve were investigations of the perceptual skill of music reading, thirteen were concerned with the expressive skills of playing an instrument, and twelve dealt with the expressive skill of singing. No studies on composing were found in the research literature.

Perceptual Skills

Listening. Research on listening skills was found to be distributed throughout the instructional levels of the public schools. At the elementary school level, research was reported on pitch discrimination, experimental methods of teaching music, and the perception of musical sounds. In the studies dealing with junior high school music, the following areas were studied: the use of program notes in conjunction with listening lessons, and various methods of presenting recorded music. The research which pertained to

listening at the senior high school level dealt with the acquisition of harmonic skills and the development of tests for evaluating music appreciation.

Wolner and Pyle (1933) identified seven elementary school children who exhibited poor vocal pitch reproduction. None of the students could distinguish a difference of thirty vibrations as produced by Whipple forks. Each student was given individual, intensive training in pitch reproduction from tones of the piano and Whipple forks. They were instructed to listen first, then to create a mental image of the pitch, and then to reproduce (vocally) the pitch as accurately as possible. The individual instruction was given for twenty minutes each day for three months. The subjects learned (with great variations in time required) to discriminate perfectly the intervals of octaves, fifths, thirds, whole tones, and semi-tones in the range from a, to a ''''.

Studies concerned with experimental methods of instruction at the elementary school level which related to music listening were conducted by Creitz (1943), Nelson (Carl B., 1954, 1956), and Andrews (1962). Creitz studied the use of the piano keyboard as a space-frame in teaching vocal music to children. After a nine-month experimental period, Crietz concluded that the twenty-six students who were instructed with the space-frame technique were superior to the control group with respect to the amount of material learned accurately, the desire to carry their school music into their homes and into their life outside the school, and in tonal thinking.

The research of Nelson (Carl B., 1954, 1956), which was reported in the preceding section, revealed that experimental instruction using a combination vocal-instrumental approach (fourth and fifth grades) yielded data on the Keston Music Preference Test which favored the experimental approach. One year later, Nelson (1956) found that the experimental group was significantly more capable in audio-visual discrimination than the control group.

Andrews (1962) investigated two methods of instruction for developing music listening ability in elementary school children. One fifth grade class, the control group, received traditional, formal, teacher-directed training. A second fifth grade class, the experimental group, received instruction which was described as being active, informal, and self-initiated. Results from the test battery, which was developed for the study, indicated that both groups learned approximately the same amount of factual information, but the attitudes of the experimental group toward the values of music were significantly more positive than were those of the control group (.01 level).

Petzold (1960) sought to determine the difference between children at each of the first six grade levels as to the ways in which they perceive and respond to the auditory presentation of musical sounds. The investigator found that boys and girls did not differ significantly with respect to their auditory perception of musical sounds. Grade level and the development of auditory perception were related only if one limits such comparisons to the above-average competence groups. The hypothesis that musical training and experience is a significant factor in the development of auditory perception could not be rejected with confidence. The addition of a rhythmic element to a melodic pattern was not found to have a significant influence upon the auditory perception of melodic patterns.

At the junior high school level, the studies of Bodie (1958) and Nash (1962) which were reported in the preceding section also are relevant here. Bodie (1958) compared the results of thematic music memory tests taken from listening experiences with and without the use of program notes. It was found that a majority of the students preferred program notes, but their ability to recognize musical themes was not enhanced by having used notes in the listening experience. Nash (1962) sought to determine student responses to different

methods of presenting recorded music. Nash concluded that the type of presentation had little effect on student enjoyment of music.

Research relating to music listening at the high school level was the concern of Lustre (1958), Keston (1954), Hevner (1931), and Fisher (1949). Lustre studied the effectiveness of three different approaches in ear training for acquiring harmonic skills, namely: chords as separate units, chords as related to the composition from which they were drawn, and a combination of the above methods. Instruction, which was accomplished by means of a tape recorder, was given for thirty-five days with periodic "immediate recall" tests interspersed. The immediate recall data in the three series did not differ significantly from each other in mean number of correct identifications of the studied material. Analysis of the delayed recall data in each series, however, revealed that the group which had received training in chord progressions out of context was significantly superior to the other groups.

The research of Keston (1954), Hevner (1931), and Fisher (1949), it will be recalled, also was reported in the preceding section. Keston evaluated the efficiency of two methods of teaching music appreciation at the high school level. The groups tested were the experimental group which listened, heard explanatory comments, and discussed the music and a control group which listened to music without comment or discussion. The experimental method was found to produce superior results. The work of Hevner (1931) and Fisher (1949) consisted of developing tests of music appreciation for use at the high school level.

Reading. Teaching children to read music has been a major problem in music education since the introduction of music in the school curriculum. Two studies reviewed elsewhere in this report give some evidence of this problem during the past few years. Ernst (1955), for example, found that twenty out of twenty-eight large city school systems reported that more than half of their

classes were unable to read songs at their respective grade levels. Good (1961) found that the teachers in his sample made greater use of rote techniques than music-reading techniques in teaching new song material in their classes.

The research completed on music reading is sparse. Totally, only twelve competent studies were found in the literature. Of this number, six were conducted at the elementary school level, two at the junior high school level, and four at the senior high school level. Studies on this problem at the elementary school level dealt with the aural and visual abilities of students in music reading, and experimental methods of teaching music reading.

Petzold (1960) discovered that fourth and sixth grade students experienced considerable difficulty in reading tonal configurations which commonly appear in the songs they sing, and that they performed at a much higher level on the aural portion of his test than on the visual portion. Petzold reported that sixth grade students did not perform significantly better than fourth grade students, and that instrumental instruction did not seem to be a factor in the music reading abilities of the children studied.

Experimental methods of teaching music reading were reported by Kyme, Hammer, Wiley, Creitz, Busse, and Skornicka. Kyme (1960), in an experiment utilizing shaped notes with 183 fourth and fifth grade students, reported that the sight reading method employing shaped notes was statistically superior to the more commonly used solfege method. The experimental instruction period used in this study consisted of fifteen lessons of thirty minutes each.

The use of the tachistoscope as a tool in the teaching of reading was investigated by Hammer (1961) and Wiley (1962). Hammer used forty-five fourth grade students in one school as subjects in his study. The rotation group design was employed. The subjects were taught by a conventional method except that the experimental groups (rotation design) received tachistoscope training

bi-weekly for nineteen weeks. Forty-seven tonal configurations identified by Petzold were used with the tachistoscope technique. Results of this work revealed that: (a) tachistoscopic training was more effective than conventional teaching procedures in teaching melodic sight-singing at the fourth grade level, (b) tachistoscopic training was more effective than conventional teaching procedures in teaching melodic sight-singing to those subjects above average in pitch discrimination and tonal memory abilities, and (c) tachistoscopic training was not superior to conventional training for those students above the class average in intelligence.

Wiley's (1962) study sought to determine the effect of tachistoscopic drill on the development of rhythmic sight reading at the fifth grade level. Fifty-eight students constituted the sample for this investigation. The design and techniques utilized were almost identical to those used by Hammer. The results of this work indicated that: (a) tachistoscopic techniques were not significantly more effective than conventional techniques in the development of rhythmic sight-reading ability at the fifth grade level, (b) tachistoscopic techniques were not more effective than conventional techniques in teaching rhythmic sight-reading to those either above or below the mean in rhythm recognition, and (c) tachistoscopic techniques were not superior to conventional techniques in teaching rhythmic sight-reading to those either above or below the class average in intelligence.

The study of Creitz (1943) which was reported in the preceding section was concerned primarily with the problem of music reading. This investigator, it will be recalled, used the piano keyboard as a space-frame in teaching vocal music to children. Creitz reported that children instructed with the space-frame technique were superior to a control group in the amount of material learned accurately and in tonal thinking.

Busse (1952) investigated the use of recordings in elementary school music classes. With respect to the development of music reading ability, Busse reported that the acquisition of music reading skill did not appear to be enhanced through learning of songs from recordings. However, this use of recordings did facilitate the rote learning of new songs.

The only study concerned with instrumental music reading at the elementary school level was that reported by Skornicka (1958). The purpose of this study was to determine if an early and constant emphasis upon time and rhythm would significantly improve instrumental music reading. A control group of seventy-two elementary school students, and an experimental group of seventy-seven elementary students was used in the study. The experimental group used materials which "were especially adapted to the counting of time and recognition of rhythmic patterns." Skornicka concluded that the experimental method, which combined the tonguing and playing of quarter notes and rests as the initial units of time and the tapping of the foot and playing on the march as the physical response to the beat, appeared to develop a stronger feeling for the beat and produced more competent instrumental music reading.

Two studies were found in the literature which dealt with music reading at the junior high school level. Stokes (1944) was interested in determining the effect of a type of tachistoscopic training (consisting of short exposures of musical units) on achievement in music reading. Three hundred and twenty students from the seventh and eighth grades of one school served as subjects. The equivalent group design was employed. Instruction was given the experimental group by using a lantern slide projector and forty slides for each of twenty lessons. Stokes reported that tachistoscopic training in the recognition of musical materials resulted in an improved span of recognition in reading the materials. However, such training appeared to have no effect on general achievement in music reading.

Peiterson (1954) studied the effectiveness of spaced notation (time-space ratio of note values) as compared to commercially printed notation on the rhythmic performance (music reading) of junior high school instrumental students. The data obtained revealed that the experimental time-space notation did not produce results which were significantly superior to those produced from use of standard commercial notation.

Studies dealing with the problem of music reading at the high school level, were concerned with the amount of attention given to music reading activities, evaluations of the solmization methods of teaching music reading, and the characteristics of superior music readers.

The study of Hales (1961) was concerned with the amount of attention being given to music reading in the high school choral music program. A selected sample of high schools in the Rocky Mountain states provided data for the study. Results of the survey indicated that: (a) few choral teachers considered music reading to be an integral part of the choral rehearsal, (b) although the choral teachers strongly favored music reading instruction, two-thirds reported that music reading instruction was not a major objective of their choral programs, and (c) over-emphasis on performance in select choirs was a major factor in limiting the amount of literature studied and the amount of time spent on music reading activities.

The research endeavors of Silvey (1937) and Gaston (1940) were devoted to an evaluation of the solmization method of teaching music reading. Silvey surveyed 1804 persons in senior high school choral groups, college choral groups, and community choral groups to ascertain the value these subjects placed on solmization as an aid in learning to read music. All subjects had been taught the solmization method when in elementary school. Each group of subjects sight-read a newly published composition which was directed by the investigator after which a questionnaire was completed by each member. Silvey found that the

solmization method was rated fourth in importance as a contributing factor in music reading skill by high school students and fifth by the college, church, and municipal choir members.

Gaston (1940), in a study of the attitudes of school children toward various phases of their musical experiences, constructed a sight-reading test which was administered to 250 high school students in ten schools. These students had been taught music reading by the solmization method in the elementary school. Gaston reported that the method of solfeggio was not an effective means of developing the ability to read music, or of developing desirable attitudes toward music in the schools.

In a study to identify characteristic eye-movement patterns of inferior and superior sight readers, York (1952) made use of eye-movement photography and voice recordings. Subjects were chosen from public school bands, orchestras, and choral groups. Among the characteristics of the "superior" readers were more rapid reading rate, shorter fixational duration, fewer fixations, larger perceptual span, and more hours of public school music training. A larger proportion of instrumentalists than vocalists were classified as "superior" music readers.

Expressive Skills

Playing. A number of studies have been reported in this chapter and other sections of this report in which instrumental music experience was a part of a particular experimental approach to general music instruction. The studies reported here deal specifically with teaching and learning problems in instrumental music of various kinds. These studies fall roughly into the following categories: (a) optimum level for beginning class study of instrumental music, (b) selection of students for instrumental study, (c) factors in the promotion of interest in instrumental music study, (d) various aspects of learning in

instrumental music, (e) evaluation of performance in instrumental music, (f) intonation problems in instrumental music, (g) problems in arranging and editing instrumental music, and (h) group and individual piano instruction.

The optimum level for beginning class study of wind instruments was the problem investigated by Pence (1942). Four experimental groups were formed (one each of beginning fifth graders, sixth, seventh, and eighth graders) consisting of a total of thirty-one students from one school. These students were given similar instruction for a twenty-four week period of time. Recordings were made throughout the instructional periods. The data obtained from the evaluations of student progress revealed that: (a) there is little advantage to be gained by starting on a wind instrument before the eighth grade in school, or at about thirteen years of age, and (b) a direct relationship appears to exist between physical maturation and musical progress. Other studies which presented some information on the relationship of physical maturation and musical progress were reported in Chapter VI. One of these studies, that of Cramer (1958) is most relevant here. Cramer investigated achievement in beginning instrumental music. The seventh grade level was indicated to be the time when optimum maturational conditions were present for beginning the purposeful study of instrumental music if successful performance is a primary objective.

A number of studies which were reviewed in other sections of this report contain information with regard to the selection of students for the study of instrumental music. These are summarized here because of their relevance to the present topic. In the earliest of these studies, Lamp (1933) concluded that neither mental tests nor physical measurements yielded a valid prediction to serve as a basis for the selection of instrumental music students. In contrast, the controlled try-out method proved to determine instrumental aptitude with a high degree of accuracy. Lamp and Keys (1935) found that neither pitch perception nor tonal memory, as measured by the Seashore tests, afforded an

index of aptitude for brass, woodwind, or string instruments which was adequate for individual guidance. Rhoades (1938), however, found that a combination of the Seashore Pitch test, the Terman I.Q., and a record of musical achievement proved to predict success in instrumental music to a relatively high degree. Of the three measures, the I.Q. score was observed to be the most significant factor. Taylor (1962), in a survey of instrumental music supervisory practices, found that generally the recruitment of students in the instrumental program was based on aptitude, interest, and personality.

Factors in the promotion of interest in instrumental music study was investigated by Nagro (1954). Data were obtained from 530 students, parents, teachers, and school administrators in Illinois cities with populations of over 15,000 persons. Interest in playing musical instruments by students appeared to be motivated primarily by a desire to play in the school orchestra or band. Many favorable influences for inculcating interest in the study of musical instruments were found to exist in the musical preferences of the home.

Problems dealing with various aspects of learning in instrumental music were investigated by Holzhauer (1941), Becker (1962), and Johnson (1962). Experimental methods of instruction were reported by Fred (1956) and Tietze (1958).

Holzhauer (1941) investigated the phenomenon of reminiscence (the improvement in the performance of a task after a time lapse during which there is no practice on the task) as observed in the memorization of instrumental music by high school music students. A majority of the subjects (thirty-six) did gain from the first attempt at recall to the second attempt, yet no significant relationships were found between musical ability (as measured by the Kwalwasser-Dykema tests) or intelligence, and reminiscence. Becker (1962) studied overlearning, initial learning ability, and review among eighty-four junior high school cornet and trumpet players. Becker concluded that overlearning did not facilitate the recall of musical material. Re-learning scores after four weeks

significantly improved by a review which occurred at the end of a two-week period. Johnson (1962) investigated negative practice on band instruments by high school students. Positive practice appeared to be of more value in the type of exercises that were used, but the use of negative practice was not discounted. More intelligent subjects made correspondingly more errors after negative practice than did less intelligent subjects.

Fred (1956) studied the effect of using a stringed instrument on the musical achievement and motor dexterity of fourth grade children. A fretted stringed instrument (which could be bowed or plucked) was designed and produced for the investigator. Fifty-two fourth grade students were randomly assigned to control and experimental groups. The experimental group received instruction on the exploratory stringed instrument while the control group received traditional instruction in singing and musical fundamentals. The period of instruction covered twenty-four class periods. The experimental use of the instrument at the fourth-grade level did not produce significantly superior results when compared to traditional instruction in singing and music fundamentals. Evaluation was based on student performances on the Kotick and Torgerson Tests of Achievement in Music, the Knuth Achievement Tests in Music, and the Minnesota Rate of Manipulation Test.

Tietze (1958) studied the effect of pre-band melody and rhythm instruments on the musical learning of beginning fourth grade instrumental music students. Twenty-six students, formed into control and experimental groups, served as subjects. Tietze concluded that a program of preliminary rhythmic training with practice pads and drum sticks (four weeks), flutophone instruction (three weeks), and heterogeneous class instruction on band instruments (final eleven weeks) was significantly superior to a total of seventeen weeks of heterogeneous class instruction. The experimental group was superior in performance even though they had played an instrument seven weeks less than the control group.

Watkins (1942) and Farnum (1950) have conducted investigations in the area of tests and measurements in instrumental music. Watkins (1942) developed and validated an instrument the purpose of which was to measure objectively and reliably the sight reading ability of cornet players. Farnum (1950) adapted Watkins' instrument for all band and orchestra instruments and also developed the Farnum Music Test.

The intonation problems of band instruments were studied by Pottle (1943). An airtight laboratory in which both temperature and atmospheric conditions could be controlled were used in this work. Seventy-five high school instrumentalists performed for the experiment. Findings reported by Pottle included the following: (a) the pitch of bar instruments, such as the Marimba, becomes flat with an increase in temperature, (b) pitches on some wind instruments become sharp while those on others become flat by increasing the loudness--pitch of brass cup mouthpiece instruments become sharp and pitch on single reeds become flat through this influence, and (c) disregard for the American Standard Pitch A-440 leads to many of the faults in intonation noted from time to time.

Buebendorf (1947) and Dalby (1958) conducted investigations in the area of arranging and editing music for school instrumental ensembles. Buebendorf's study was reviewed in the section on the transmission of the culture--literature. This investigator formulated criteria for selecting music for school orchestras, selected twenty-five symphonies of the classical period (1760-1800) which met the criteria, and adapted C.P.E. Bach's Symphony in D Major, Op. 183, No. 1, for school orchestra. Dalby (1958) conducted a survey of high school band directors and music publishers in an attempt to study musical activities, instrumentation, and technical competence as factors in arranging music for high school bands. In terms of arranging music, it was concluded that the median compass was the best guide to the most practical playing range of each instru-

ment for high school students.

The only study found in the literature dealing with class piano instruction for piano students was conducted by Hutcherson (1955). This investigator conducted an experiment dealing with the relative effectiveness of group and individual piano instruction at the beginning level. Six students (ages six to nine) received private instruction while six others received class instruction. No significant differences were found between the two groups in knowledge of music rudiments, sight reading, or in the quality of prepared performances under informal recital conditions.

Singing. The studies found in the research literature on singing as an aspect of the teaching-learning process in music generally were concerned with: (a) the teaching problems of high school choral directors, (b) experimental methods of teaching voice and choral music in the junior and senior high school, (c) adolescent voice and singing characteristics, and (d) singing problems and characteristics of elementary school children.

Garretson (1955) identified teaching problems which confronted Illinois high school choral directors. Data were obtained from 305 choral directors. The greatest problems, in order of frequency, were: strident nasal tone, diction, vowel consistency, accurate pitch, blend, music reading, and teaching an understanding of interpretation elements and style.

Studies on methods of teaching singing and choral music at the junior and senior high school level were conducted by Patrick (1952), Ball (1953), and Sims (1961). Patrick did a comparative study of two methods of music instruction at the seventh and eighth grade levels. The subjects in this study were all females. One group received instruction in the traditional junior high school chorus manner; the second, with major emphasis on understanding various types of music heard on radio, at concerts, and musical shows. There were no observed differences in end-products of the two methods--general chorus or

general music class.

Ball (1953) conducted a study of three methods of teaching high school choral music, namely, "traditional," "rhythmic," and "mood" methods. Each method was allocated one and one-half hours of teaching time during the experiment. Nine choral compositions were used, three each in categories judged "easy," "medium," and "difficult." One composition in each category was randomly assigned to each method of teaching. A well-known high school choir was used in the experiment. Results of this study revealed no significant difference in the effectiveness of the three methods as used in the study. The overall difficulty of the compositions did not appear to have any effect on the efficiency of any one particular method of teaching choral music.

Sims (1961) experimentally investigated the relative effectiveness of group and private voice instruction with beginning high school voice students. It was concluded (after performance evaluation by a panel of three college music instructors) that class-taught students were not lower achievers than were privately-taught students; thus, they were equal, or superior, to the privately-taught students. Group instruction with these types of students was as effective as private instruction.

Studies relating to the adolescent voice and singing characteristics dealt with voice range of adolescents (Joseph, 1959), tone quality and physiological factors (Russell Nelson, 1954), and problems of mutation in the male adolescent voice (Swanson, 1959; Ekstrom, 1959; and Havlovic, 1937).

Joseph (1959) studied the voice range in boys and girls from age eleven through age eighteen. He concluded that (a) both before and after the onset of puberty, as age and overall size of the body structure increased, voice range lowered, (b) the distribution of the low terminal pitch for both sexes centered around the f sharp of their respective ranges, and (c) the highest terminal pitch was related to the low terminal pitch in that both were overtones of a

harmonic series built upon a fundamental tone one octave below the low terminal pitch.

Nelson (Russell, 1954) conducted a physiological study of the utilization of the vital capacity in phonation, resonation, and articulation, and its effect on tone quality in the adolescent. He concluded that the development of the minimal motor muscles to a greater specificity through the use of exercises based upon a biological and phonetic knowledge of the human voice produced improved tone quality, more normal vibrato, fuller resonation, and a higher degree of selectivity in articulation.

Swanson (1959) studied the phenomenon of voice mutation to determine if there were factors which might affect the learning outcomes in vocal music classes, and to determine if there is a methodology which could better meet the needs of adolescent boys during this period in their lives. The control group (N=100) was given traditional instruction in classes containing both boys and girls during a nine-month experimental period. Experimental group classes were made up of boys only. Swanson concluded that the experimental method produced a more favorable attitude toward and a greater interest in music. The majority of the boys preferred separation from girls in music class. They also enjoyed singing songs in the bass clef register and also enjoyed experimenting with the falsetto voice.

Ekstrom (1959) conducted a comprehensive study of the adolescent voice. He found that singing during the period of voice change was not harmful, and that students who sang in choral organizations improved to a much greater extent in ability and flexibility than did students in general music classes.

In a study of boys' voices and song material in the senior high school, Havlovic (1937) found that the average boy's vocal range was greatest before he lost the higher tones of his unchanged voice and smallest immediately after he lost the unchanged tones. After the changing period, the range develops to

an average scope of an eleventh. In analyzing the literature for changed voices, it was found that the tenth grade boy must have a range of a ninth to sing a tenor part or a range of a fourteenth for the bass part. In the eleventh and twelfth grade, the range must be a fourteenth for the tenor part, or a fifteenth for the bass part. Concerning the number of boys with the range necessary to sing all of the pitches in his part, only 18.6 percent of the tenth grade, 3.7 percent of the eleventh grade, and 2.4 percent of the twelfth grade had the capacity.

Studies dealing specifically with singing problems and characteristics of elementary school children were reported by Hattwick (1933), Heiliger (1936), and Culpepper (1961). Hattwick (1933) studied the role of pitch level and pitch range in the singing of children from the age of four and one-half years through six. Hattwick discovered that when children voluntarily set the pitch level for a song it was significantly lower than the published version for children, and remained so even after forty-eight practices on a given song. Heiliger (1936) studied the effects of training upon the musical performance (singing) of five-year-old children. Children in the experimental group were taught to reproduce single pitches, intervals, and three-to five-note phrases. Heiliger found that (a) the experimental group improved over the control group (which was taught in the traditional manner--singing without emphasis on single pitches or intervals) and continued to improve throughout the forty training periods, and (b) the improved singing ability was found to be accompanied by an increase in interest. With respect to hearing impairments (diplacusis, hearing acuity, pitch discrimination, and tonal memory) in fourth grade students, Culpepper (1961) concluded that if the severity of a child's hearing impairment did not prevent his hearing music, it had little or no effect on his singing. Results of comparisons with a competent singer group indicated that there were significant differences between the groups on pitch discrimination and

tonal memory. Defective singers often had a smaller range and deviated from the true pitch of the notes in the musical score, usually below that required.

Two studies, those of Shull (1961) and Busse (1952), which were reported in other sections of this chapter, also have relevance here. In a study of vocal literature written by selected nineteenth and twentieth century composers, Shull found the music of these composers to be inappropriate for inclusion in graded series of music books for the following reasons: range requirements, extended periods in high or low tessituras, fragmentary melodies, and difficult accompaniments. Busse's (1952) study on the use of recordings in elementary grade vocal music was cited in the section of this chapter devoted to music reading. In contrast to the control group's superiority with respect to reading, the group which used recordings (experimental) was found to learn rote material significantly faster. The experimental groups excelled especially when the technical problems presented by the rote songs became more advanced than the teachers were capable of handling. In the learning of rote materials, the groups which used recordings secured consistently better performance ratings in the time-rhythm area than they did in the pitch and general effect areas. Children were found to express a preference for the recorded voices of women and children.

The work of Jersild and Bienstock (1934), and Broquist (1961), which was reported in Chapter VI, also has meaning in this section. Jersild and Bienstock, in their study of the vocal range of young children, concluded that (a) a person realizes a large portion of his potential pitch range while he is still in the first three grades of the elementary school, (b) ninety-nine percent of the tones occurred within the range from first line "e" to fourth space "e" of the treble staff, and (c) it would be profitable to emphasize vocal training in the lower school grades.

Broquist (1961), in a study of the attitudes toward music of a large group

of elementary school children, reported that no statistically significant difference was found in attitudes toward music between those students taught by the classroom teacher and those taught by the music specialist.

Aesthetic Sensitivity

Research studies pertaining to aesthetic sensitivity which were completed during the time period covered by this project dealt generally with (a) the musical taste and preferences of school children, (b) environmental influences on the development of musical taste, and (c) problems relating to the aesthetic sensitivity of various types of students. Most of these studies present information that the teacher needs to know to effectively plan activities for the development of musical taste. Few studies deal with actual experimental methods or behaviors which seem to affect the teaching-learning process in this area of music instruction.

Three studies, those of Blyler (1957), Rogers (1956), and Nelson (Carl B., 1954, 1956), dealt with the problem of musical preferences and taste of students at the elementary school level. Blyler studied the song choices of 9007 children in the elementary school. Characteristics of preferred songs included strong melodic movement, well defined cadences ending on the tonic, major modes, primary chordal background, and dynamic variation. Disliked songs possessed words not in keeping with believed interests of the various age groups, static melody, frequent use of the tonic tone and tonic triad, imperfect authentic cadence, ending tones other than the tonic, and accompaniments which repeated the melody.

In a study of the expressed musical preferences of elementary school students (grades two through twelve), Rogers (1956) concluded that children from the upper socio-economic strata tend to have a greater preference for more serious music than do those from lower socio-economic strata, but that this

preference occurs with diminishing intensity progressively from the second grade to the twelfth grade. Popular music was the preferred type of music by students from all age groups, both sexes, and all socio-economic strata. This preference intensifies as students increase in age.

Studies by Nelson (1954-1956) were cited in the acculturation section of this chapter under the sub-head "perceptual skills." It will be recalled that Nelson found that students in grades four and five who had a combination vocal-instrumental music program scored significantly higher on the Keston Music Preference Test than did students whose musical performance activities were limited to vocal music.

One study, that of Keiser (1957), was devoted to determining the interests and growth in appreciation of a group of junior high school students. Keiser employed the Gaston Test of Musicality (first section) to determine the musical interests of seventh grade students before and after an experimental period in general music classes. The students who engaged in singing, playing the autoharp, games and dances, toy orchestra, arranging for the toy orchestra, and listening, were found to become more interested in music during the semester. The students who only sang gained in interest, but not significantly. Neither the experimental nor the control group, however, significantly improved in appreciation as measured by the Keston Test of Musical Preference.

Two studies dealt with the problem of musical preference at the high school and college freshman level. Rubin (1952) investigated the effects of musical experience on musical discrimination and musical preferences among 903 students (grades seven, nine, and twelve). He found that musical experiences appeared to have a limited effect upon discriminatory ability. His findings concur with those of Rogers in that both high and low experienced groups showed a predominant interest in music of transient current vogue. Musical experience appeared to have little effect upon musical preference.

Erneston (1961) studied the effect of musical experience and mental ability upon the formulation of musical taste. He found students (780 college freshmen) with more experience to have a higher level of acquired taste in music. Among the low experience students, high mental ability appeared to be positively related to the level of musical discrimination, but not to the level of taste. In the groups having experience, mental ability appeared to be positively related to the level of musical discrimination, but not to the level of taste. In the groups having experience, mental ability appeared to be a significant factor. Erneston found no significant differences between the different groups studied with respect to musical preference.

The environmental influences seemingly affecting the development of musical taste have been given attention by several investigators. The youth educational activities of the Nashville (Tennessee) Symphony Association were studied by Fott (1958). The purpose of this study was to determine whether the musical programs presented in the schools of Nashville significantly affected the musical taste of the students exposed to these programs. It was concluded that there were no statistically significant changes in musical taste after the series of concerts were played for the students in grades seven through twelve.

Other studies relating to environmental influences on taste or preferences were reported in Chapter VI. These studies will be reviewed again because of their relevance to the present topic. The earliest study devoted to this problem was conducted by Hughes (1932). This investigator was concerned primarily with environmental factors influencing the preferences of junior high school students. It was found that emphasis by the schools on certain areas of music generally resulted in preferences for these areas, and that the home had considerable influence in encouraging the study of instrumental music. The greatest part of the musical background of the students was acquired through the school.

Another study reporting on the environmental influences was that of Wiebe

(1940). This research was concerned with the effect of song "plugging" on the music preferences of high school students. Wiebe concluded that "plugging" did not affect the ratings of initially "more liked songs," but that it did affect the ratings of originally "less well-liked songs."

Gernet (1939), in a study which was planned to ascertain the influence of age and grade level on musical preferences, reported an inconsistent but significant change toward classical music at successive levels of maturity.

The study by Daniels (1934) revealed slight but positive relationships between musical preferences and personality characteristics. Subjects indicating a preference for popular music were found to be less neurotic, less self sufficient, more extroverted, and more dominant than the group favoring art music.

In a comprehensive study of the musical preferences and socio-economic status of students in grades seven through fourteen, Baumann (1958) reported significant differences in the music preferences of high and low socio-economic groups for some kinds of music. The difference was in the degree of preference and not in one group accepting a kind of music rejected by the other group. These data also revealed that regardless of the amount and type of music courses taken, popular-commercial music selections were most acceptable to all teenagers, without differences according to age, socio-economic class, or sex.

Fisher (1951) found that classical preference differences between age, sex, or socio-economic status, were largely a function of the transmission of specific judgements about specific compositions. Subjects from unskilled lower economic status groups did not differ in reaction to music from subjects from the professional upper status groups.

Sell (1950) reported that there seemed to be an aesthetic tonal preference for music played by an orchestra rather than that played by a band. This finding suggested to this investigator that reasons other than aesthetic tonal preferences were responsible for the decline of orchestras in the public schools.

Problems relating to the aesthetic sensitivity of various types of students were investigated by Willman (1944), Parker (1961), and French (1962). These studies also were reported in Chapter VI. Willman was interested in determining whether visual design stimuli would suggest to high school musicians themes with characteristics similar to those suggested to composers by the same stimuli. Willman reported that student's responses and the general characteristics of their responses were quite similar to those of the composers. The possible relationship of aesthetic sensitivity to musical ability, intelligence, and socio-economic status was investigated by Parker (1961). Major conclusions to this work were that only a moderate relationship seemed to exist between aesthetic sensitivity and musical ability when intelligence and socio-economic status were held constant, and that any relationship between aesthetic sensitivity and socio-economic status was negligible. French (1962) studied the relationship of musical ability as measured by the Seashore Tests of Musical Talents and the Gaston Test of Musicality and the responses of ninth grade students to four items on the TAT test. The results of this work revealed that students scoring high on the music tests projected more affective responses to the TAT items than did those students scoring low on the music tests.

Kyme (1956), in a study of the relationships of aesthetic judgements to music capacity, reported that aesthetic judgements could be used to differentiate between persons known to be musical and persons observed to be less musical. These results, Kyme believed, gave some evidence that the best predictor of musical behavior must be based on observations of the individual in many musical situations, and that the act of appreciation (the assessment of music at its true value by the individual in the light of his experience), was worthy of more consideration than it had been given in predicting musical behavior.

Undifferentiated Concepts

Reviewed here are those studies which do not relate specifically to any one of the major headings in this chapter (or to the objectives of the teaching-learning process in music), but rather deal in toto with the teaching-learning process in specific instructional areas, or with the role and influence of programs and curricula on the process.

General Music

The term "general music" has been used with increasing frequency during the past twenty-years. It refers to a type of class, usually elective at the high school level and required at the junior high school level, which is available to all students in the school. The content is not fixed, but rather is flexible--to appeal to, and service the needs of the students in a specific school. The purposes or objectives of these classes have not been standardized to any extent, and some confusion exists as to the real objectives of the activities and learnings in such classes. (See Chapter IX.) For these reasons it is impossible to differentiate the role of these classes in promoting the objectives of the teaching-learning process in music as defined in this project. Hence, studies on the total general music program or class have been classified under the major heading of "undifferentiated concepts."

Three studies of this type were found in the literature examined in this project. Zima (1956) compared two approaches to the teaching of required music classes at the junior high school level. The experimental program was described as "A Developmental Approach" while the control groups received a "Traditional Approach." The investigator concluded that the experimental procedure produced superior results at the sixth grade level, as measured by the Kwalwasser-Ruch test, but at the seventh and eighth grade levels the control groups scored higher on the Kwalwasser-Ruch test.

Weigand (1962) compared the effectiveness of two methods of teaching general music, his principal purpose being to determine the effectiveness of the organization of activities and materials into broad units of instruction for student experiences during a one-semester general music class at the seventh grade level. Both the experimental and control groups were taught the same basic materials. It was concluded that the resource unit of instruction produced a higher degree of effective teaching and learning in that two of the experimental groups scored higher than their control counterparts on the Farnum Music Notation Test and the achievement test developed by the investigator.

The study of Gilfeather (1962), which was reported in Chapter VI, also has relevance here. This study was concerned with the motivation supplied for below-average adolescents in general music classes in large city schools. Gilfeather reported that: (a) large city school systems are cognizant of the needs of below-average students in general music classes and that much concern was in evidence relative to motivations, methods, and materials suitable for these students, and (b) motivational factors thought to be useful were peer approval, interest, curiosity, working for tangible rewards, and competition.

Programs and Curricula

Two competent studies which did not relate directly to any one of the objectives of the teaching-learning process in music, but which were definitely of import to the process, were found in the research literature.

The first of these studies, by McCaslin (1958), was concerned with extra-curricular activities. Data were obtained from 265 eleventh grade students. McCaslin reported that students who missed classes in order to participate in extra-curricular activities were generally those who tended to have high I.Q.'s, higher grades, higher achievement test scores, more participation in after school activities, and a tendency toward fewer absences. The school activi-

ties requiring students to miss regularly-scheduled classes most frequently were music activities. Three schools in one county in Maryland served as the sample in this study.

The second study, by Stephenson (1955), dealt with music curriculum planning. While this study is restrictive in that it was confined to a local community, it does provide an example of an approach (community case study) to curriculum planning in music which might be useful to other researchers. The study sought to (a) investigate the pattern of musical culture in the community of Lawrence, Kansas, (b) determine from emergent attitudes and activities the musical needs of the high school students, and (c) determine the curriculum, equipment, and school plans necessary to meet these needs. A study of the community was conducted in the areas of history, social stratum, economic status, educational status, and musical activities. A pattern of "needs" was developed from this study. Some of the findings reported by Stephenson were: (a) parents, for the most part, used music in their lives and were desirous that it be a part of their children's lives, (b) parents felt that the specialized music groups in the school were rapidly approaching a limit in terms of expansion, but that much attention should be given to general music activities, (c) popular music and incidental music was the most preferred type of music of the entire community, and (d) high school teachers (non-music) favored limiting performing organizations and emphasizing general music.

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CHAPTER VIII

RESEARCH RELATING TO CONSTRAINING ELEMENTS IN THE TEACHING-LEARNING PROCESS IN MUSIC

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RESEARCH RELATING TO CONSTRAINING ELEMENTS IN THE TEACHING-LEARNING PROCESS IN MUSIC

The context within which the teaching-learning process occurs is a determinant of its direction, quality, and quantity. The studies discussed in this chapter reveal the complexity of this context and the innumerable constraints it places on the teaching-learning process. A true synthesis of the following studies on specific variables is nearly impossible because these studies either directly analyze or infer the interdependency of many social variables. Most of the studies in this chapter are descriptive surveys. They are broad attacks on the complexity of constraining elements which assist, impinge upon, and coerce the process of education. Most of them cover a multitude of elements, from the minutiae of teaching materials to gross community attitudinal states. Therefore, the following analysis tends to be a series of reviews rather than a synthesis of information.

Administration and Supervision

The administration and supervision of music in the schools are behaviors, prescribed patterns of behavior and results of behavior which provide (a) a liaison between the school and its community, (b) a liaison between a school and its school system, and (c) an operational system within a school. Basically, it is centered on teaching and administrative functions and the denotata of those functions. Where the student is involved, it is in the role of a recipient who is affected by an operational system. Accordingly, the following research is concerned with administrators and supervisors and their relationships and activities in their milieu.

Administrative Organization

The organization of music in the schools establishes points of responsibil-

ity and channels of communication for the personnel in a school system. It also establishes a design for the implementation of curriculum and arises out of a philosophy of education and objectives for music education in particular. Sometimes it evolves in peculiar patterns because of the lack of these considerations. As such, administrative organization affects the people who function as educators and learners as well as the interaction between them. Further, it determines the type of musical experiences which will occur in the schools as well as their quality. Specific studies on the administrative organization of music were not found in the research literature. Rather, studies relating to this problem consisted of broadside attacks on the entire problem of administration and supervision of music in the schools. There were several elements which were not differentiated and analyzed specifically. For example, the separation of administrative organization from administrative practice, supervision from administration, or supervisory practice from administrative practice was not established in even the grossest terms. Because the minutiae in these studies is voluminous, only selected findings are reported here.

The general organization of administration for music education was included in Von Ende's study (1941). His respondents preferred a unit organizational structure but few of the systems studied had any kind of coherent administrative organization. Concerning the effect of administrative organization of pupils, Henderson (1959) could find no general relationship between administrative organization and pupil achievement. Ernst (1955), in his study of twenty-eight large city systems, found a vertical structure for administrative responsibility from the chief officer in charge of music education down to the music teachers in the schools. However, there were no objective means reported by which the responsibilities of the various administrative positions could be determined. Where finances or philosophy interfered with music in the schools, music was not taught and no administrative organization existed.

This was found in two of ninety-six school districts studied by Heffernan and Matesky (1955) and in fourteen percent of the white elementary schools and twenty-five percent of the Negro elementary schools of Virginia by Good (1961). In the latter state, fifteen percent of the schools had no coherent organization for their music program because no objectives for the music curriculum were formulated. Only fifty percent of these schools had a defined, logical curricular organization for the students and the teachers. Too, only a third of these schools had a definitive yearly budget for their music curricula, with the white schools having a higher median annual appropriation than the Negro schools.

Both Von Ende (1941) and Ernst (1955) examined the position of the chief music administration officer in large school systems. Not all systems had such an officer at the time of Von Ende's study. Where these officers did exist, there was no common title for the office. Ernst found, in all of the twenty-eight large cities he analyzed, there was a chief administrator for the organization of music in the schools. There were no general, common definitions for the role of such an officer among these systems but there were many tasks which were common among them.

The administrative responsibilities of the music teacher, and particularly the instrumental music teacher, include administration and curriculum development as well as the teaching of music. This is cited by Corson (1948) and by Taylor (1962).

The organization of elementary school music has had a variety of treatments. Ernst (1955) found that even though this variety existed, there was a predominant practice of giving the planning and organizing responsibility to an assistant director in large city systems. Perhaps the most informative analysis of the administrative organization for elementary school music was made by Peterson (1957) who studied the preferences of elementary school administrators

for four general music organizational plans for each of the three grade levels of their schools: Plan A--all music being taught by a music specialist with no music responsibility for the classroom teacher; Plan B--music being taught in part by the classroom teacher and in part by a visiting specialist; Plan C--all music being taught by the classroom teacher; and Plan D--music being taught by the classroom teachers who trade subject responsibilities with one or more teachers. Plan B was used most frequently (thirty-six percent) in grades one through three; Plan A was used most frequently (fifty-seven percent) in grades four through six; and Plan A was used most frequently (eighty-nine percent) in grades seven and eight. There was no significance found in the relationship between the time spent on music and the plan in effect, nor between the size of the school faculties and the plan in effect, with the exception of schools having fewer than fifteen teachers where Plan D was in effect.

Administrative Practice

Studies in administrative practices in school music present the same problem as found in studies on administrative organization. They tend to be broad and inclusive of several factors, including organizational factors and supervisory aspects of school music. Too, they include every level of musical endeavor in the schools from the state level to a single school. The more significant findings are reported here.

A study of administrative practices in music at the state level was conducted by Noah (1953). In this study, the various activities in music of southern state departments of education were investigated. Most of the eleven states investigated provided descriptions of child development in their literature but few states had a statement of basic philosophy concerning music education. Four of the states had a full-time music supervisor and published courses of study. In one state, music was delegated to an assistant director

of instruction. In another, the county was responsible for the music and a handbook was used by the county teachers. Another state had a complex organization including the scheduling of one-day conferences and workshops for teachers. In three states, there was no state-level activity. The credit hours in music required for graduation from high school varied from one to four credits in three states. Seven states approved credit for private study, nine for vocal class. Course offerings varied from only performing groups and general music to the gamut of courses possible. Six states offered theory, harmony, appreciation, and history on the same basis as other non-music, academic subjects. In most cases, textbooks were selected by a local board of education. There were no uniform teacher certification requirements in music, the range being eighteen to eighty-two semester hours in music which included a range of eight to fifty hours in applied music. Collectively, there was no activity, except classroom teaching, in which these eleven state departments were not involved. The greatest quantity of involvement was in those states which had a supervisor of music.

The effect of supervision on the presence of music in the curriculum was revealed by Good's study (1961). This report indicated that nearly one-third of the elementary schools in Virginia, which were without the services of an assigned music specialist or supervisor, either offered no music or didn't consider music important enough to be an integral part of the curriculum. Only one-fourth of the schools had used consultative services from the state level which may have been due to the fact that only one person was employed by the state about 1960 in that capacity. The questionable importance of music supervision in 1941 among the large cities of Von Ende's study was revealed by a pupil-music supervisor ratio of 1,271 to one.

Henderson (1959) analyzed selected, large (over 306,000) city school systems and small (under 306,000) city school systems and the pupil achievements

in those systems. The factors found to be not significantly related to pupil achievement were (a) the numerical adequacy of the administrative staff, (b) methods of selecting teachers, (c) teachers salaries, (d) administrative organization, (e) community relations, (f) curricular organization, and (g) physical facilities. Factors related to pupil achievement were methods of evaluating pupils and instructional activities. Some degree of relationship was found in the kinds of elective courses, the educational preparation of the instructional staff, and instructional materials. In small schools, there was a significant relationship between size of school and pupil achievement. It was also found that the major factors influencing the music curriculum were the laws governing financial aid, physical education requirements, definitions of the titular head of the music curriculum, tenure of the music director, policies of practices concerning budgets, non-school activities of students, and the adequacy of facilities.

Von Ende (1941), in his analysis of administration in large city systems only, found that state-wide adoptions of materials affected the choice of materials in four cities. Only two of eleven cities actually knew the cost of music in their schools. Ernst (1955), in a similar study, found that the place of the supervisory staff in music on the salary scale of twenty-eight large cities varied greatly. Class sizes in General Music classes tended to be larger than classes in other non-music subjects. Three-fourths of the instrumentalists in these schools were attracted to bands and only one-fourth to the school orchestra. Of the cities surveyed, only one-fourth made use of the more economical central circulating music library system. Roe (1960) also found the same proportion of one-fourth among 105 schools using a central library. Most of the music departments surveyed used extrinsic rewards for motivational purposes. Personnel were selected for performance groups in the following order of preference: (a) tryout, (b) balance needed, (c) recommen-

dation, (d) standardized tests, and (e) grade level. One school out of the 105 offered group piano lessons on an extra-curricular basis.

Corson (1948) studied administrative practices for instrumental music in secondary schools and compared these with principles developed by a jury of experts. Less than one-third of the fifty-two schools studied had employed qualified teachers in terms of academic preparation and teaching experience. Sixty-eight percent of the instrumental teachers carried a load of more than thirty periods per week. Only nine schools offered a variety of experiences appropriate to various pupil needs and interests. Most of the schools offered band and more than half offered orchestra. Almost twice as many pupils participated in the band as in other instrumental activities. Band and class instruction was provided in most cases but less than one-fourth of the schools provided schedule time for orchestra and small ensembles. A large majority of the schools used four or more instrumental groups in public relations activities.

Fite (1954) analyzed the cost to students for participating in music education activities in twenty-six randomly selected Kansas schools. Such costs were rarely related to the size of the school enrollment. There were no consistent policies found with respect to formal class fees for musical organizations. The annual cost of owning a band instrument by the student was more than four times as great as the annual cost of owning a string instrument. The greatest cost to the student was private lessons. The cost to the student playing an individually owned instrument was twice as great as the cost to the student using a school owned instrument. The total costs for students in band was nearly fifty percent greater than comparable costs in the orchestra and was more than twice the comparable costs for students enrolled in each of the school choral organizations.

In a study of administrative practices in instrumental music, Taylor (1962) ascertained that generally an instrumental teacher teaches all instruments.

The only exception to this was string teachers. Beginning instruction was found in the fourth grade, typically, but this also was available throughout all levels of the elementary and secondary schools above the fourth grade. School groups were permitted to perform at any function where they would (a) render a school and community service and (b) derive an educational experience from the situation. As did Roe and Ernst, Taylor found the development of central libraries for instructional materials among several of the school systems surveyed.

Faculty Schedules

A major factor in the teaching-learning process is the ease with which a teacher can accomplish the tasks which are his responsibility. The factor of time becomes a major consideration for him. The time he can devote to a specific task is controlled by the quantity and the complexity of the tasks he must perform. His teaching load, then, constrains the quality of his work. Information about teaching loads is generally scattered throughout the literature. Only two studies have been made on this problem directly.

Steg (1955), in a study of the loads of 345 Michigan music teachers, found that a majority taught in elementary or junior high school, or both, in addition to their responsibilities in the high school. The majority also taught in towns of 10,000 or less population. They estimated their teaching loads as follows: light--one percent; reasonable--forty-one percent; heavy--thirty-nine percent; extremely heavy--nineteen percent.

Colbert (1956), in a study of 529 teachers in Indiana, found that they had a teaching load greater than that recommended by the North Central Association of Colleges and Secondary Schools. An average number of 28.45 periods were taught per week. The pupil-period ratio reported averaged 932.3 pupils per week. Fifty percent of the teachers taught at all three levels--elementary, junior high school, and senior high school. These teachers averaged three

hours and twenty-two minutes weekly in assigned duties other than classroom teaching. They reported an average of 16.5 concert performances per teacher per year. Slightly more than fifty percent of the instrumental teachers reported contest participation while slightly less than fifty percent of the vocal teachers did so. Teachers in small communities (under 9,999) reported more contest participation than did teachers in large communities. The average hours for the respondent's work week was fifty-one hours and fifty-five minutes.

Corson (1948), in a study of administrative practices, found that sixty-eight percent of the teachers worked more than the standard teaching load at that time of thirty periods a week. Taylor (1962), in a similar study, found instrumental music teachers in secondary schools for the most part on a full-time schedule. Elementary school music teachers had a half-time to three one-half days schedule per school.

Supervision

The research concerning the supervision of music in the schools has been directed toward two levels of supervisory organization -- the state department of education and the local school district or school system. Although there have been many studies with titles indicating that they were studies in supervision, they lacked specific definition and purpose such that they covered all aspects of school music organization and administration. Supervision is considered in the following review to be the process and factors affecting the process whereby an individual music specialist provides guidance, assistance, and demonstrations for subordinate specialists and/or non-specialists who teach music. Parenthetically, it should be mentioned that the term supervision is used more broadly in some of the literature and this broad usage is a basis for confusion in the definition of tasks for supervisors as well as the definition of research on music supervision.

Two competent studies of supervision at the state level were found in the research literature. At the time that Annett (1938) made his survey, eleven of the fifty-three states and territories required, by law, that music instruction be offered in the schools. Eight of the states had state supervisors of music while eighteen states had some agency performing all or part of the state supervisor's functions. Of the states which did not have a supervisor, seventeen state directors of education reported the need for such an official while nine reported no need of this kind. The typical state supervisor of music was thirty-five years of age, had a little over six years of higher education, had thirteen years of previous music education experience, and had held his position for a little less than six years. All of the existing state music supervisors expressed support for music contests. Four state supervisors had duties in connection with the certification of teachers, and two reported duties in teacher training. Most of the time, the state supervisor's duties were classroom visitation, conferences with other educators, and correspondence. Ordinarily, his most important work was in rural communities.

Noah (1953) studied the activities in music of state departments of education in eleven southern states. Music supervisors performed a wide variety of general and specific services, covering the areas specified in the professional literature concerning the functions of a music supervisor. Four states -- Louisiana, Mississippi, North Carolina, and Virginia -- had full-time supervisors while six states did not. Florida gave these responsibilities to an Assistant Director in the Division of Instruction.

Seven studies were conducted which analyzed the status of supervision at the district or school system level. Because these studies were comprehensive in character, only the findings which were considered to be most significant are reported here. There appear to be three aspects of the supervisor and his tasks: (1) the supervisor's professional preparation, (2) the supervisor's

professional competencies, and (3) supervisory practices.

The professional training and teaching of the seventy-seven music supervisors in the study by Banse (1951) was not a determinant of the presence or absence of adequate music supervision in the schools. A more important factor hindering supervisory practices was the inadequate undergraduate background of classroom teachers. Dryden (1954), in his study of elementary grade music supervisors, found that most of the respondents had a Bachelor of Science Degree and forty-five percent had attended graduate school. The respondents ranked highest in practical value their studies in piano, methods courses, English, and Psychology courses. In a study of city music supervisors in California by Landon (1959), fifty percent of the respondents held masters degrees and a few held doctoral degrees.

The leadership competencies of music supervisory personnel was found by Henderson (1959) to be related to the adequacy of policies and practices in supervision.

The practices of supervision have been analyzed from several points of view. Smith (1933) made a comprehensive investigation of supervisory practices in twenty-four communities. The wealth or lack of wealth in these communities did not necessarily guarantee an efficient or inefficient program of supervision. Some wealthy communities had inadequate supervision of music and some less affluent communities had excellent supervisory organization and practices. On the other hand, there were a greater number of more adequate supervisory programs in wealthy communities. Banse (1951) analyzed the supervisory practices of 180 music supervisors in charge of elementary school music for grades one through six. The title supervisor proved to cover a variety of positions. The greatest difficulty of the largest number of respondents was dealing with problems presented by individual teachers. In most cases, the classroom music was taught by the classroom teacher. The median number of visits to classrooms by

the respondents was four per month. Over half of the supervisors used no special method to evaluate the classroom teacher. Music talent tests were used by more than one-third of the respondents. The correlation of music with other subjects was reported by one-half of the respondents. The types of assistance given to the classroom teachers beyond activities in the classroom included meetings, in-service training, conferences, professional literature, teachers committees, and demonstration lessons. The additional duties of the music supervisor were typically, teaching, administration, public performance, and community leadership.

Heffernan and Matesky (1955) found that sixty out of ninety-six districts had supervisors who visited the school districts regularly. One of the practices of these supervisors was a regular conference with the classroom teachers. Landon (1959), in an extensive and detailed analysis of supervisory practices in city schools, found that supervisors ranked their areas of activity as follows: (a) resource and advisory activities, (b) curriculum development, (c) in-service education, (d) student activities, (e) evaluation, selection and use of instructional materials, (f) personal and professional development, (g) personal activities, (h) administrative activities, (i) research and development, and (j) community leadership and public relations. Supervisors, administrators, and a group of nationally known music specialists agreed on the priorities concerning within classroom and directly related activities of the supervisor, but the group of music specialists placed a greater value on research, evaluation, community leadership, and public relations responsibilities. The range in number of schools supervised per supervisor was 10.6 to 59.4 schools. The median supervisory load was 18.4 schools. Combined elementary-secondary school districts of over 20,000 pupils in average daily attendance accounted for the highest per school supervisory loads, while the smallest loads were in districts under 10,000 pupils in average daily attendance.

The functions of the instrumental supervisor, according to Taylor (1962), were defined in terms of the following responsibilities: quality of instruction, recommendations for curriculum, teacher selection and assignment, equipment and materials budget, servicing and repair of instruments, facilities design, selection of equipment and materials with the aid of teachers, assignment and rating of student teachers, in-service education of teachers, radio and television programs, city-wide festivals and general coordination. Taylor's forty-four respondents were located in cities with a population of 100,000 or more people.

Scheduling

The method and quantity of scheduling for music in the schools determines the variety and quality of musical experiences made available to the student. In one sense, scheduling is the demonstration of an educational philosophy. In another sense, it is a mechanical problem created by ambitious or apathetic music teachers and sympathetic or unsympathetic administrators. No coherent study of scheduling per se has been made. The following information has been extracted from comprehensive analyses of curricula and activities in the schools. It is divided into two groups, that concerned with the elementary school and that concerned with the secondary school.

In the study by Heffernan and Matesky (1955), respondents indicated that about one hundred minutes per week were devoted to music in seventy-five out of the ninety-six elementary schools studied. All but nine of these schools scheduled some kind of choral group within the regular school day. Ernst's study (1955) revealed that in the period 1941-1955 primary grade instruction time increased. Intermediate grades by 1955 still fell short of the time recommended by the MENC. Peterson (1957) studied organizational plans for music in grades one through eight and found that there was no relationship be-

tween the organizational plans used by schools and the quantity of time devoted to music. Taylor's study (1962) revealed that instrumental music was begun usually in the fourth grade. All instruction was given within the school day and instrumental music classes typically met twice a week.

Studies in secondary school music scheduling were limited to the time allotted to performance groups in the school week. Two general studies were made by Roe (1960) and Ludwig (1962). Roe's study revealed that less competent groups received less attention in that a second band or girls glee club and the boys glee club typically met twice a week and the other more advanced groups were scheduled daily. In a study of nine co-curricular activities including such activities as student government and athletics, Ludwig found that all 263 responding institutions offered some type of music. All schools scheduled band; almost ninety-nine percent scheduled chorus; eighty-three percent scheduled glee clubs; and thirty-seven percent scheduled orchestra. As the school enrollment increased, the percentage of schools which scheduled orchestra also increased. In about seventy percent of the schools studied, the music activities were scheduled during the day. Smaller schools made extensive use of an activity period. In about fifty-two percent of the schools, these activities were scheduled daily. Corson (1948), in a study of instrumental music, found that less than half of the schools scheduled instrumental music during the day. Twelve years later, Taylor (1962) found that typically, instrumental music was scheduled in the school day five times per week.

Community Influence

The relationship between the community and school music has been studied in four ways: (1) adult influence on music in the schools, (2) community activities related to music in the schools, (3) socio-economic factors affecting the schools, and (4) the influence of mass media on music in the schools or on those who participate in the schools.

Adult Influence

Parental attitudes toward music in the schools were studied by Burmeister (1953). The quality of public performance and the acquisition of musical skills were not the primary interest of the subjects. The influence of the quality of public performance on parental attitudes toward the music in the schools of their communities was negligible. Parents indicated that more emphasis was needed in the teaching of music appreciation. Teachers were evaluated by parents more on general qualities than on specific skills or attainments. It was clear that parents desired an increase in the amount of general music at all levels.

MacOwan (1955) studied the public pressure on school music activities, particularly the participation of school bands in a state fair. He found that principals considered thirty-one percent of the charity drives, twelve percent of the contests, and twelve percent of the awards as not having sufficient educational value to justify their continuation. These principals further indicated a fear of repercussions if they discontinued these activities. The marching bands of eighty-nine schools participated in the state fair, seventy-five using school time to prepare for the event. A majority of the principals thought the educational benefits of this participation in the state fair justified its continuation. Community pressure for the band to participate in the state fair was indicated by thirty-six principals. The school boards of fifty-nine schools had a written policy concerning such out-of-school activity and sixty percent of the principals whose systems had no written policy thought that such a device would alleviate the pressures they felt.

Administrative and music personnel in sixteen school systems were interviewed by Price (1960) in an investigation of the nature and effectivensss of community pressures on secondary school music. The most frequently mentioned sources of pressure came from individuals (parents), from civic groups, and

parent (booster) organizations. Methods of pressures were complaints to the administration, gossip and complaints at public meetings, formal written pressures, and "felt" pressures. These pressures were most commonly met with explanations of policies or reasons for actions. Direct pressures were not a very great force because they were usually concerned with minor issues. However, "felt" pressures for compliance with community desires were a frequent source of effective pressure in influencing the content or direction of school music. On the other hand, in a study of elementary school music, Wassum (1957) could find no strong influence on school music exerted by the community.

Community Activities

Many symphony orchestras support a youth education program by presenting concerts for school students in concert halls and in the schools. Fott (1958) analyzed the effect of such concerts in one community on the musical taste of the students who attended them. He could find no change in musical taste after a series of concerts were played for the seventh through the twelfth grades. The types of concerts included chamber groups, a symphonette, and a full symphony orchestra. These concerts were all presented in the schools.

Simmons (1962) analyzed the motives and factors in the musical backgrounds of participants in community choruses. No specific factors in musical backgrounds of the respondents were found which determined the participation or non-participation in community choruses. Respondents did have a broadening background as they progressed through the levels of education both in and out of school. They also revealed that an outstanding factor in their backgrounds was participation in vocal performance groups, a high incidence of private piano instruction, and concert attendance. Non-participants gave reasons for not participating as time restrictions, scheduling conflicts, and the feeling of not being qualified.

Socio-economic Factors

Smith (1933) analyzed the supervision of music in twenty-four communities. There were differences between these communities in the amount of support given to the music in the schools. The relative wealth of a community was not a guarantee of either excellence or deficiencies in supervisory practices. Some communities provided considerable support in films, equipment given and loaned, and parental participation. Other wealthy communities were not as supportive. This difference also occurred in the less wealthy communities. However, there was a tendency for the more affluent communities to provide better supervisory services and a generally greater support.

In an analysis of the problems of beginning music teachers, Fletcher (1956) could find little difference in the kinds of problems in communities of differing size or type.

Mass Media

The effects of "song-plugging" over the local radio on students' opinions of popular songs was studied by Wiebe (1940). He found that after one month, the "plugged" songs were liked as well as they had been on a pre-test, while those which were not "plugged" were rated somewhat lower. After the second month, there were no further changes. Plugging (propaganda) did not affect the ratings of the initially liked songs. It did affect positively those which were not as well liked initially.

Contests and Festivals

Although contests and festivals have had a broad support in music education, they have had little examination for their effectiveness. Basically, they are a form of extrinsic motivation for students and teachers. There are published objectives for these endeavors but these objectives have never been validated. Like most of the literature about these activities, the two studies reviewed

here are descriptive of what was done and are compilations of opinions about the value of these. Neither of these studies contains an effort to establish realistic and specific objective criteria and objective instruments to evaluate those criteria. No experimental design was used.

A nation-wide survey which included forty-four of the forty-eight states at that time was conducted by Cory (1951). The objective of the survey was to determine the practices in music competitions and festivals. Official music festivals were found to be mostly competitive and based, generally, on four classifications for the schools. Students averaged 110 miles to district competitions and 230 miles to final or state competitions. Three judges from college and high school faculties were the usual number evaluating large groups. Bands usually competed in sight reading in addition to performance. Soloists and ensembles were rated in a similar manner. Instrumental entries were usually restricted to instruments normally played in bands and orchestras. The sponsoring agencies for these activities were either the MENC or secondary school associations and were controlled by joint action of administrators and music directors. Several sources of financing were found, such as participant registration fees, school membership dues, event fees, and gate receipts from public performances.

Opinions about the effectiveness of contests in Pennsylvania meeting stated objectives was surveyed by Campbell (1955). The 1,054 respondents were alumni participants in competitions, school administrators, and music teachers. There was general agreement that the festivals were producing the educational, social, and aesthetic experiences that were expressed in the aims and objectives of the Pennsylvania Music Educators Association; the contests tended to raise the level of performance of music in local schools; the contests were a motivating force for adult participation for alumni; the participating director grew professionally as a result of the contest; time out of school was justified, according to

the responding principals. There was no general agreement concerning the procedures for and the administration of the contests. The responses of schools of differing size showed no significant differences.

Philosophy

The philosophy of music education expressed by an individual or a group is considered to be not only a basis for functioning but also provides direction for that functioning and a delimiting constraint to its scope. Therefore, the philosophical aspect of behavior is a somewhat nebulous but very real constraining factor in music education. Positively, it provides direction and purpose. Negatively, it established boundaries of constraint. The following studies do not present systematic philosophies of music education, i.e., rational, logically developed, philosophical positions. Rather they are descriptive of existing theories and practical applications of these theories in the schools.

McCorkle (1942) made the only avowed and competent analysis of philosophical theories concerning music in the schools. He analyzed some of the literature in three fields -- educational psychology (James, Judd, and Thorndike), methodology and curriculum-making (Morrison and Dewey), and educational philosophy (Horne, Dewey, and Washburne). Psychologists have theorized on the measurement of capacity, the probable relationship between heredity and talent and emotional development. Their common belief is that the child must be educated in terms of his measured capacities but also in other areas, such as dance, which are not measured. Emotional development is a point of ambivalence between the science of aesthetics and philosophy. Psychologists do not agree on methodology for the social, moral and aesthetic outcomes on which they do agree. The theorists in methodology and curriculum-making generally fall into two groups -- essentialists (Morrison) and progressivists (Dewey). All agree that mere association with the arts is not enough but that a disciplinary and intellectual approach is necessary. Yet the prolific expansion of theory and

materials has not improved the public's taste on the requirements for artistic products. Therefore, McCorkle concluded, the moral and social efficacy of the arts may be a misconception. Educational philosophers have found little agreement in the strategy of disciplinary design and its psychological bases. In fact, these philosophers have given little specific thought to the function of the fine arts in the schools, other than its moral, social, and cultural potentialities.

Three studies in the applied aspects of music education philosophy have been made in relatively recent years. Wassum (1957) analyzed and evaluated music in self-contained classrooms in terms of philosophical pragmatism as it is expressed by Dewey. The criteria used were the presence of the concept of (a) reality as being the process of inquiry itself, (b) value as being contextual, and (c) knowledge as being a function of a problematic situation. Applied to music in the schools, the factors for analysis become the amount of time for music in the school week, breadth of activities, environmental facilities, treatment of individual differences, and education of cognitive powers. Also studied was the most influential executant of philosophy among teachers, administrators or communities. Pragmatic philosophy in practice was found in all classrooms. Wide variations in extent and consistency were found. The most important influence in the development of pragmatic educational principles in practice was the classroom teacher. The administrator's most important contribution was the provision of equipment. Communities were seen to have little influence upon school practices, an inconsistency with the tenents of pragmatism.

The philosophical constructs or beliefs about music in the schools which are held by those who are professionally involved in school music are determinants of actions and curricular design, among many things. The degree of agreement in beliefs held by secondary school principals, secondary school

music teachers, and college teachers of music was studied by Jones (1961). He identified twenty philosophical issues in nine basic categories including (1) the basic purpose of music in the high school, (2) performance groups, (3) ensemble groups, (4) music classes, (5) extra-curricular activities, (6) general finances, (7) parent organizations, (8) time distribution, and (9) scheduling. He also compared the respondents concepts of an ideal situation in terms of the twenty issues with their perception of the actual situation. On the twenty issues treated in an ideal situation, the respondents disagreed on nineteen. On the treatment of the twenty issues in actual practice, the respondents disagreed on seventeen. Music teachers and administrators disagreed concerning an ideal solution for seventeen of the twenty issues. There was disagreement between music teachers and college teachers on the desired ideal concerning nine of the twenty issues. College teachers were found to be more dissatisfied with existing practices than were the high school principals and high school music teachers. In none of the issues were the respondent's concepts found to be independent of the respondent's position. This relationship was true in the three aspects of the issues which were studied, namely desired ideal, actual practice, and agreement or disagreement between groups.

Kelly (1962) interviewed personnel in school systems in five midwestern cities ranging in population from 75,000 to 250,000. The interviewees included one superintendent, ten principals, ten music teachers, and one music supervisor. The objective was to ascertain the degree of agreement in beliefs between them concerning the importance and function of music in the public schools. The beliefs tested were structured into five categories: (1) aesthetic development, (2) development of skills, (3) functional distribution, (4) social development, and (5) democratic living. No significant differences were found in the beliefs of administrators and music teachers. A significant difference was found between secondary school principals and music teachers

and the elementary school principals and music teachers. Many secondary teachers were found to be acting contrary to their stated beliefs by over-emphasizing performance skills.

In addition to the preceding studies, several studies drew inferences about the philosophy of music education from general investigations of practice. Noah (1953), in his study of Southern state departments of education, found little evidence of a "profound statement of philosophy" about music or for music in the literature published by any of the eleven states. Ernst (1955) concluded that the General Music class seems to be a neglected area, considering the published aims of music education and particularly the needs of the high school student. Music teachers as a whole have been trained to direct instrumental and vocal groups and often lack specific training for general music teaching. The philosophical position of music for every student, including the non-performer, is aborted due to the lack of teachers educated to fulfill that objective, Taylor (1962), in his survey of supervisory practices in instrumental music, found a general philosophy in practice which emphasized broad participation in the performance of music, personal and social growth, and a high quality of musical experience for students.

Teaching Aids

The conception of teaching aids used in the following review is broad. Any facility or equipment is a teaching aid. Any facility or equipment used in the teaching-learning process assists or hinders that process. Thus, it is a constraint on that process. In one sense, a room is a teaching aid. Too, a songbook for elementary grades and music for performing groups are teaching aids but because their primary function is the embodiment of literature, they are not included here. Teaching aids are considered to be basically material media and the physical environment for that media.

Buildings and Equipment

The most comprehensive and continuing authoritative reference concerning music buildings and equipment for schools is that of Best (1945) and its subsequent revisions. There is little to be served here in a review of this voluminous and complex study because of its ready availability in published form. It should be noted, however, that the work was the result of findings derived from a questionnaire sent to music educators and school architects as well as a study of the research in acoustics and architecture.

Films

Three studies of the use of motion sound films were made beginning in 1933. Arnspriger (1933) experimented with films for science and music in grades five and seven, contrasting his experimentation with traditional techniques of teaching. He found that motion pictures made a distinct contribution to learning. In music, the experimental group excelled the control group in average gains on test items not involving pictures in every unit studied. The units of study were on the instruments of the orchestra by family groupings. In units on woodwind and percussion instruments, the superiority of the experimental group was statistically significant. The average gains made by the experimental groups exceeded those made by the control groups by statistically significant amounts in all groupings of high, average, and low ability groups.

Tarpley (1954) experimented with the teaching of film music itself using two motion picture films and recordings of their sound tracks. It is significant that those who received instruction in the film music gained in factual knowledge about the film music composers and their techniques of composition, gained more insight into the nature and purpose of film music, and gained knowledge about specific film music compositions. They were not able to judge the appropriateness of the mood relationship between the music and the visual scene

or to appraise the musical content of the film score.

Cockrum (1955) analyzed the evaluations of music films made by five select groups of twenty-four evaluators including (1) college educators, (2) college music specialists, (3) secondary school music teachers, (4) secondary school music students, (5) secondary school non-music students. The objective was to discover what basis for the evaluation of films may exist. There was disagreement on all items within each of the groups of evaluators and the distribution of agreement was similar between groups. High school students revealed a different orientation to the films than did teachers concerning suggested revisions, indicating a different set of values and objectives in viewing the films. Music educators and non-music students were more negatively critical of the films, while music students and high school instructors gave the highest overall ratings. No generalizable agreement concerning the quality of the film was found between or within the groups. Therefore, no pattern was found by which film evaluation criteria could be used.

Recordings

The use of recordings as an aid to teaching grade school music was the basis for an experiment by Busse (1952). The five control groups used procedures advocated in the song textbooks while the five experimental groups used the recordings which were supplied with the textbooks. The experimental groups were taught rote singing by means of the recordings and they progressed as well as the control groups which were taught rote singing by other means. When technical problems presented by the rote songs became more advanced than the teachers were capable of teaching, the experimental groups excelled. The experimental group had a significantly faster rate of learning. At the grade levels where the acquisition of reading skills was the major effort, the control groups excelled. The only significant improvements in music achievement

as measured by the Knuth Music Achievement tests were made by two of the five control groups. In the learning of rote materials, the groups which used the recordings obtained consistently better performance ratings in the time-rhythm area than they did in the pitch and general effect areas. The children expressed a preference for the recorded voices of men and children. It was concluded that recordings are a superior method for teaching the more difficult rote song material.

Television

Shetler (1961) evaluated the content of music programs produced by the National Education Television network. His evaluators were students whose ages ranged from below ten to 22 years and instructors of music. The musical content and performance of ninety films were rated high. Students and teachers agreed in most cases on the strongest and weakest features of the individual program. The fact that the narrator or host of the film was a well-known musician or authority seemed to mean less to the young students than to the high school and college students. The evaluators were quick to detect the lack of relation of the program's content to the class for which the film was intended. Films without commentary were criticized negatively. Teachers felt that in some cases the program data supplied by NET were inadequate and misleading. University students responded more favorably on production features than secondary school students, and the younger students seemed most aware of faulty production. The most frequently occurring suggestion for improvement was sound fidelity.

Audio-Visual Aids (General)

Smith (Yeuola R., 1957) made a survey of seventy-three Maryland junior high schools for the use of audio visual aids in general music classes. Individual differences in teachers were related to the kinds of activity and,

therefore, equipment used. All of the schools surveyed had motion picture projectors, three-speed record players, recordings, and pianos. A majority had filmstrips and projectors, 16mm films, slide projectors, opaque projectors, tape recorders, radios, rhythm instruments, orchestral instruments, and a public address system. A majority of the schools had films made available to them through lending libraries from a local department of education. About fifteen percent of the schools had their own audio-visual aids department with an appropriate budget. The record libraries of these schools ranged in number of volumes from fifteen to five hundred. The size of the school enrollment did not appear to be an influential factor in the size of the record library. About one-half of the teachers listed extensive use of conventional audio-visual techniques. The majority had never used an opaque projector and three dimensional materials. Recordings and the piano were the most commonly used aids.

Good (1961) studied ninety-eight schools in Virginia finding that more than three-fourths of them had a piano and one-half had recording and record playing equipment. Some schools did not have an adequate supply of song textbooks.

CHAPTER IX

RESEARCH RELATING TO THE PROGRAM OF MUSIC EDUCATION

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RESEARCH RELATING TO THE PROGRAM OF MUSIC EDUCATION

The term "program" refers to the totality of the activities in music education. Relevant research would be that devoted to a description, analysis, and evaluation of the program in music education for purposes of identifying common elements, strengths, weaknesses, and recommending improvements in the program. Studies of these types do not refer directly to the teacher, the student, or the teaching-learning process as conceived in this report. Some studies may relate, however, to those identified under the category, "constraining elements." Areas of research in this category have been identified as: (a) status and practices, (b) analysis of curricula, and (c) evaluation of programs.

The majority of the studies* reported in the following pages are descriptive and analytical surveys. Many employed the "dragnet" approach in collecting data and some are the type classified in an earlier chapter as "service studies." The data they present are valid only when considered in terms of the locale and the time at which the study was completed.

It is logically impossible to generalize or to synthesize these findings. The studies present a variety of different types of data. The data are generally presented in percentages and frequencies. Comparisons of descriptive data obtained in different locales, during different years, for different purposes, can not lead to valid generalizations or syntheses. Likewise, it is impossible to project implications for practice from these data. To do so

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*These studies are believed to constitute only a sample of the possible number of competent studies of this type completed during the years 1930-1962. Most descriptive and analytical surveys are completed for theses requirements. No organized attempt, it will be recalled, was made to review all theses completed during the years covered by the project. Theses were, in fact, given the lowest priority rating in the procurement process (see Chapter III).

would be more than spurious.

Studies of these kinds, however, are of value to the profession. This would be particularly true if all such studies were reviewed and the data placed in proper historical perspective. The growth and development of music education, nationally and regionally, could then be shown more clearly and documented. The real value of these studies is to the individual investigator and the schools involved in the study. The studies reported here were included because they were competently done; they gave an overview of the music education program in the United States, regions, and individual states, during certain periods of time; and they revealed the various types and sources of data used in studies of these kinds.

Status and Practices

Reviews of the studies dealing with the status and practices of music education have been organized and are presented under the following headings: the total music program, the elementary school music program, the secondary school music program, and the general music program. The information presented in each study has been greatly condensed for presentation here. In the main, the reviews present sheer reporting of selected raw data.

Total Music Program

Surveys and reports considered under this category generally were concerned with either all aspects of the music program or with one aspect (piano, instrumental) through all levels of the public schools. Some studies were samplings of schools in the entire United States, others sampled schools within a section of the United States, and still others, the largest number, used schools from one state as the sample. The review of the studies presented below follows this pattern of organization.

The earliest survey found in the literature (1930-1962) on the over-all

status of music education in the United States was reported by the Music Educators National Conference (MENC) in 1934. This report presented the results of a questionnaire which had been sent to a stratified sample (by area and town population) of public school superintendents across the country. The questionnaire sought information mainly on the curtailment of music education programs. The information obtained revealed that almost half of the schools responding (forty-nine percent) had curtailed "cultural subjects" in the schools, but only four schools had eliminated them entirely. The economic depression was the most common reason given for the curtailment of these subjects. The superintendents reported that usually all cultural subjects were given equal appropriations, but when discrimination existed, it was almost always in favor of music.

Freeman (1955) conducted a similar survey using a smaller stratified random sample (stratified by city populations). The responses contained in 282 questionnaires constituted the data analyzed in the study. The major findings reported by Freeman included the following: (a) some broadening of the music education curriculum had occurred during recent years, but only a small fraction of the activities recommended by the MENC Research Council were found in most communities, (b) choral music was the most prevelant activity in all schools, (c) the band was the predominant instrumental activity and it had supplanted the orchestra, (d) little time was spent in music appreciation in the high schools, but general music was becoming the most frequently scheduled music activity in the junior high school, and (e) when a broad program of community music activities existed, there also was a broad program of high school music activities.

Sur (1949) surveyed a stratified sample (city size, population, and geographic region) of public schools throughout the United States to determine

the status of piano instruction. The data obtained (4447 questionnaires) revealed that: (a) where piano class instruction was given (660 schools), it was available to all students in all types of schools to about the same extent, (b) the larger groups of piano students in the highest proportion of cases were found in the elementary schools, and (c) lack of funds, lack of instructors, lack of space, time conflicts with other classes, depriving private teachers of a livelihood, concentration on other instruments and voice, and inadequately prepared teachers, were the reasons given by the school systems for not offering piano instruction.

Surveys of music education programs on a regional level were conducted by Nelson (1955) and Smith (William D., 1957). Nelson studied the instrumental music programs in forty-seven cities in four North Central States (Illinois, Indiana, Michigan, and Wisconsin). Major findings revealed that: (a) approximately sixty percent of the schools offered tonette instruction while less than twenty percent offered class piano instruction, (b) string instrument instruction was the weakest area of instruction, (c) sixty-eight percent of the schools offered summer music programs, and (d) a majority of the schools participated in non-competitive music festivals rather than in music contests.

Smith (William D., 1957) analyzed the music education activities of State Departments of Education in ten selected North Central States (Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin). Some of the major findings of this survey included the following information: (a) none of the State Departments supervised a testing program in music, (b) most of the State Departments sponsored audio-visual aid projects, (c) most State Departments gave some form of guidance to teacher education programs, and (d) State Departments generally accepted the responsibility for maintenance of curriculum standards in music in the public schools.

Comprehensive survey studies on the state level reviewed in this project

covered the states of Virginia, Illinois, and Oregon. Richmond (1938), in a survey of the music education programs in Virginia public schools reported, among many other findings, that teachers in the smaller elementary schools (one to three teachers) reported different activities, equipment, and competencies than those teachers in larger elementary schools. Negro teachers reported approximately the same activities and competencies as did the white teachers in the respective size schools, although they reported having less equipment.

Kuhn (1953) conducted a most comprehensive study of the music programs in approximately one-fourth of the public schools in Illinois. The major data obtained in this study have been organized in terms of the elementary school, high school, and the music teacher for presentation here. Elementary School: (a) separate elementary schools were not as likely to include music in the curriculum as unit district schools, (b) smaller elementary schools carried on a more limited music program than the larger schools, (c) about twenty percent of the elementary schools did not include music in the curriculum, (d) classroom teachers taught music in about half of the elementary schools surveyed, and (e) a general conformity to accepted and recommended curricula practices as advocated by MENC was evident. High School: (a) unit district high schools generally showed a higher percentage of student enrollment in music than separate high schools, (b) small high schools tended to show higher percentages of student enrollment in music than large high schools, (c) high schools with high per capita costs tended to show a higher percentage of student enrollment in music than low per capita cost schools, and (d) the music programs were almost exclusively organized around selective performance groups. Music Teacher: (a) the music teachers were found generally to be adequately prepared, (b) the college major commonly was in vocal music or band, (c) two-thirds of the music teachers were prepared to teach other subjects, (d) one-half of the music teachers had taught or were teaching subjects other than music, and (e) some

division was usually found between supervisory duties and teaching responsibilities.

Two surveys of the music programs in the Oregon public schools were completed during the same year--1954. Davis (1954) surveyed over one-fourth of the Oregon schools through questionnaires sent to administrators, music specialists, elementary classroom teachers, and a random sample of high school students. Major findings reported by Davis included the following: (a) elementary classroom music programs were found to be predominately and sometimes exclusively singing programs, (b) music specialists were responsible for approximately thirty percent of the elementary music activities, (c) instrumental training was found throughout the elementary school but was usually available only to students who owned an instrument, (d) the high school programs consisted almost entirely of bands, choruses, and a few orchestras, (e) the music programs in most of the high schools were departmentalized, and (f) general music was taught usually by the vocal teacher.

Harrison (1954) restricted his survey to the instrumental music program in the Oregon public schools. Areas studied were course offerings, physical conditions and facilities, and teacher certification and qualification. Some of the findings reported by Harrison were: (a) the two most emphasized areas in instrumental music were band and orchestra, (b) junior high schools ranked higher than the other school classifications in course offerings in instrumental music and the percentage of the total students in instrumental music, (c) all respondents considered their music facilities to be inadequate, and (d) instrumental music teachers averaged six years of higher education.

Elementary School Music

The survey studies reviewed which dealt exclusively with music in the elementary schools covered the states of West Virginia and California. One study

was concerned with practices in the elementary schools of Northeastern Ohio.

Smyers (1955) surveyed 348 classroom teachers in West Virginia to gain information on the music programs conducted in the elementary schools. An analysis of the responses obtained on a questionnaire revealed that over two-thirds of the teachers did not have use of a piano. Record players, however, were available to more than seventy-five percent of the teachers. The state-adopted music series was used in slightly more than fifty percent of the schools and recordings of folk songs were available in a like number of schools. A large percentage of the teachers reported that they had not completed the required six semester hours of college music.

Matesky and Heffernan (1955) investigated the scope of instrumental music in the fourth, fifth, and sixth grades of city elementary schools in California. The source of information utilized was ninety-six city school superintendents. The questionnaire technique of data gathering was employed. These investigators reported, among other findings, the following information: (a) eighty-one of the ninety-six school districts offered some type of beginning instruction in band and stringed instruments, (b) small, homogeneous string classes were prominent in the replies, and (c) about sixty-three percent of the districts had some form of pre-instrumental training.

The study reported by Barr (1956) was concerned with the status of music in sixty-nine elementary schools in Northeastern Ohio. Barr reported that music specialists were responsible for the direction of the music program in a large majority of the schools contacted. However, the elementary classroom teachers taught approximately fifty-seven percent of the music experiences offered in the schools. Music classes were regularly scheduled in about ninety-three percent of the schools, and forty-three percent of the schools had a locally adopted course of study in music.

Secondary School Music

Surveys on music programs in the secondary school were found to be concerned with the total secondary school music program, or to either the choral or instrumental program. Some of the surveys included junior high school grades as well as the senior high school grades. Others were restricted to the programs found in either the junior or senior high school.

Total Music Program. Surveys dealing with the total secondary school program which were reviewed in the project, with but one exception, dealt with secondary school music programs within individual states. The one exception, that by Price (1950-1953), was concerned with the high school music program in schools approved by the North Central Association of Secondary Schools. Price studied 442 approved high schools and reported that: (a) very little systematic relating of music to other areas of instruction was reported, (b) nearly all the schools reported having a band, but orchestras were relatively few in number, (c) a large majority of the schools reported having a girls' glee club, and a mixed chorus, (d) small schools provided musical experiences for a larger percentage of their students than did large schools, and (e) various methods were employed by these schools to provide all students with musical experience--required or elective classes, required or elective music activities, and participation in assembly programs.

Carney (1959) confined his survey to those high schools in Kansas reporting enrollments of less than 150 students. Data were analyzed from responses on 112 questionnaires. Carney reported that music courses were offered for credit in at least fifty percent of the high schools in the sample. The courses offered in order of frequency were: band, boys' glee club, girls' glee club, and mixed chorus. Ensembles, both instrumental and vocal, were found in fifty-two percent of the schools. Fourteen percent of the schools offered general music. Only three schools of the 112 reported that music was not offered in

the school program.

The music programs found in 374 public school districts in Iowa were reported by Lawson (1960). Data were obtained (questionnaires) from high school administrators and high school music teachers. This survey revealed the following types of information: (a) only nineteen schools reported string instrument instruction, and of these, only sixteen reported a high school orchestra, (b) music theory and appreciation classes were very limited in number and no classes in music history or composition were reported, (c) solo and ensemble activities sponsored by the state music educators association were the most widely utilized activities, (d) fifty-seven percent of all Iowa high school students did not participate in any type of music activity, (e) the majority of teachers were responsible for either vocal or instrumental instruction but not for both, and (f) three percent of the music teachers did not have a music major or minor in their undergraduate preparation for teaching.

Wayne (1961), in a survey of participation in music in the secondary schools of Massachusetts, reported that one hundred and four students per thousand received instrumental lessons at the seventh grade level. This number of participants in instrumental music decreased to less than half in the senior high school program. Orchestra was revealed to be the weakest area in terms of enrollment.

A survey of the music programs in the high schools of Missouri was conducted by Hills (1962). The sample used in this work included 444 high schools. A major emphasis in the survey was the role and function of the music teacher. Hills reported that: (a) very few music teachers were required to teach non-music subjects, (b) many high school teachers were required to teach students in grade school and junior high school, and (c) most high school music teachers reported that they supplemented their income with outside employment. Other data collected revealed that the scheduling of music classes apparently

was a common problem of all music teachers.

Choral Music Program. Only one survey was reviewed which dealt with the school choral music program. This survey, by Hixson (1953), was confined to the choral music programs in junior high schools in Texas. Hixson obtained information from ninety-one junior high schools which were considered to be representative of all junior high schools in the state. Major findings in this report included the following types of information: (a) the larger the junior high school the larger the choral program and the greater the number of types of performing ensembles, (b) performing choirs and general music classes were combined more often than offered separately, (c) medium-size schools exhibited more interest in music contests than did small or large schools, (d) larger schools participated more in clinics and festivals than did smaller schools, and (e) practices in scheduling prevented students from taking more than one music class.

Instrumental Music Program. Four surveys were reviewed which dealt with instrumental music programs in the public schools. The survey of Scheuerle (1959), which was concerned primarily with the financial problems in instrumental music, used a random stratified sample of secondary schools in the United States. Data were obtained from 481 returned questionnaires. Some of the major findings of this survey included the following types of information: (a) local boards of education were the primary sources of financial assistance for instrumental music, (b) boards of education in the smaller schools provided a larger percentage of financial support than their counterparts in larger school systems, (c) the purchase of instruments was the principal expenditure for a majority of the schools, and (d) other expenditures were for music, equipment, repairs, transportation, uniforms, adjudication and festival fees, and insurance premiums on equipment.

Shadley (1951) studied the instrumental music programs in Indiana high

schools. Data were obtained from 360 questionnaires returned by high school instrumental teachers and principals. Shadley reported the following information: (a) the majority of bands and orchestras met on school time, (b) instructors in the smaller cities and rural areas were more likely to have piano or voice as a major performing media, while in the larger cities the tendency was toward orchestral and/or band instruments, (c) the size of the band and orchestra did not appear to have a direct relationship to the size of the community, (d) a majority of high schools had some budget for instrumental music, but a large majority depended partially on resources other than the school budget for the purchase of instruments and equipment, (e) heterogeneous instrumental classes were found more commonly than were homogeneous classes at the high school level, and (f) schools in the smaller cities reported greater contest participation than did those schools in cities with over 10,000 population.

Gaffney (1959) was interested in determining the status of high school dance bands in Missouri high schools. Data were obtained from 163 high schools with enrollments of one-hundred or more students. From an analysis of the data obtained, Gaffney concluded that: (a) larger high schools found it much easier to support a dance band than the smaller schools, although dance bands of smaller communities participated more in the community, (b) varied instrumentations was found and the bands were reported to be used for concerts rather than dancing, (c) seventy percent of the rehearsals were scheduled outside school hours, and (d) the usual library consisted of less than fifty arrangements.

Dalby (1958), in a study concerned primarily with the arranging of music for the high school band, also reported on the activities of high school bands in 211 schools of thirteen mid-west and western states. Band activities in terms of frequency of occurrence ranked as follows: pep rallies, street parades,

dances, indoor concerts, football half-time shows, basketball half-time shows, out-door concerts, festival concerts, and festival parades. The average number of yearly appearances was reported as 36.3. Between ten and fourteen percent of the total student bodies in the schools surveyed were reported to be enrolled in school bands.

General Music Program. The studies reviewed which were concerned with the status and practices in the general music program in the secondary schools, with but one exception, dealt with such programs at the junior high school level. One study, the exception, was concerned with "academic courses" in music at the high school level. This study was included under this classification (general music) because of the vagueness and lack of definitiveness of the term and concept "general music." For some music educators, "academic courses" of the type found in this survey are considered part of the general music complex.

The three surveys concerned with the general music program at the junior high school level were conducted by Hollingsworth (1953), Mueller (1960), and Willeke (1955). Hollingsworth was interested in the status of the general music program in the junior high schools in Texas. An arbitrary sample of seventy-six junior high schools believed to be representative in terms of size and geographical location constituted the sample. Hollingsworth reported that junior high schools with larger enrollments tended to maintain a more comprehensive general music program than did schools with smaller enrollments. The elective general music program was more common than the required program. And when general music was offered on an elective basis, students from smaller junior high schools elected the course more frequently than did students from larger schools.

Mueller's (1960) survey of the general music program in junior high schools in California was concerned primarily with administrative and teaching organization. Data were obtained from a random sample of junior high school general

music teachers (eighty-two questionnaires). The data thus obtained revealed that the majority of general music classes were taught for fifty minutes per day, five days per week for eighteen weeks by teachers whose major subject in college was music. One-third of the teachers responding to the questionnaire indicated a preference for teaching classes other than general music. More than eighty percent of the schools represented in the sample permitted students to substitute participation in performance groups for credit in general music.

The survey of Willeke (1955) used forty-seven junior high schools in Northeastern Ohio as the sample population. The analysis of the data obtained from these schools included the following information: (a) the most prevalent type of junior high school general music class was that consisting of both boys and girls, grouped according to grade level, (b) most of the schools were meeting the requirements of the Ohio High School Standards for junior high school music in terms of time spent by students in the general music class, (c) pupils in the general music classes generally were given opportunities to demonstrate their musical talent publicly, and (d) a high percentage of students taking general music continued their music study by entering performance groups in the senior high school.

Peterson (1962) conducted an investigation of academic music courses offered in Missouri high schools during the 1961-62 school year. Academic music courses were defined as non-performance courses (fundamentals of music, theory, history, literature, appreciation, and a mixture of these areas). Data were obtained from ninety-five high schools. The analysis of the data revealed that more than fifty percent of the academic courses in music were offered in schools with enrollments under 250 pupils. Most of these courses were offered as electives and were scheduled five days per week for 40-60 minutes each meeting. Textbooks currently available were felt not to meet the

needs of most of the academic music courses offered.

Analysis of Curricula

Several studies were found in the research literature which were devoted to an analysis of various curricula in the music education program. In the main, these studies were analytic and descriptive surveys. With the exception of the McCauley (1932) report, all such studies related to curricula in the high school or to the program in general music. McCauley analyzed courses of study for grades one through eight from seventy school systems indicating the specific aims of each grade level, results expected to be accomplished at each grade level, subject matter materials and activities, and the techniques of procedures. Findings were not summarized, but the extent of agreement existing among the various courses was indicated. This was the only study reviewed which related to curriculum in the elementary school.

High School Curricula

Two relatively recent studies were reviewed which dealt with an analysis of the high school curricula. Uldrick (1961) studied the high school curricula through analysis of state curriculum guides and a questionnaire to state departments of education. Information was received from each of the fifty states. Data obtained through this analysis included the following information: (a) thirty states had curriculum guides in music or included music in their state course of study--twenty-seven states had guides at the elementary school level, eighteen states had guides at the junior high school level, and nineteen states had guides at the senior high school level, (b) the music program was administered in sixty-eight percent of the states by a state division or department of instruction or a division of elementary or secondary education, (c) the music program was under a state division of music education in eight percent of the states, (d) the music activities most frequently recommended were boys' glee

club, girls' glee club, chorus, orchestra, and band, (e) the second most frequently recommended experiences were small vocal ensembles, class instrumental instruction, general music, music theory, and music appreciation, (f) the activities recommended least often were dance band, music history, and class instruction in piano, and (g) twenty of the states had a supervisor or consultant in music.

Bliss (1960) analyzed courses of study in three-year city high schools in Ohio. Data were obtained from fifty-one high schools. Bliss reported that: (a) twenty-four schools did not use a course of study, (b) a great number of the objectives stated for large choral groups involved mental and motor skills, (c) aims and objectives for advanced choral groups were more numerous and more explicit than those stated for "training" groups, (d) a large number of the objectives stated for large instrumental groups involved attitude development, (e) a greater number of the objectives stated for academic music courses involved knowledges and understandings rather than other types of learning, (f) the emphasis in academic courses was on harmony and theory courses rather than on exploratory courses in history and appreciation, and (g) the objectives stated for the marching band seemed to contribute little to the musical growth of music students in terms of intrinsic musical value.

General Music

The studies by Boyle (1960) and Whitener (1954) were the only studies reviewed which dealt specifically with an analysis of the curricula in general music. Boyle studied the curriculum in general music developed in thirty-five high schools in four midwestern states--Kansas, Missouri, Nebraska, and Oklahoma. An analysis of the data obtained through a questionnaire included the following types of information: (a) the specific objectives of the general music courses varied greatly but the over-all objective was to promote a

better understanding, knowledge, and appreciation of music, (b) more than one-half of the courses were organized around the students' interests, and (c) the most successful class activities were field trips, the study of jazz and popular music, and the writing of original compositions.

Whitener (1954) reported on the program in general music in North Carolina secondary schools. Data concerning this curriculum were obtained through a questionnaire which was completed by thirty-four of the thirty-five secondary schools (grades 7-12) in North Carolina. Analysis of the responses revealed that general music was required in more than sixty percent of the schools in the sample, and was most frequently offered in grades seven and eight. In a majority of the schools, singing activities received much emphasis while listening, study of instruments and theory, musical games, and folk dancing received some emphasis in the general music classes. No emphasis was given to creative activities in the majority of the schools studied.

Information on the curriculum in general music also was found in the status studies of Hollingsworth (1953), Mueller (1960), and Peterson (1962). These studies were reported in the previous section of this chapter. Hollingsworth found that the most frequent activities in the general music classes in the junior high schools of Texas were unison and part singing, listening to live performances, use of radio and movies, and assigned readings and reports. Music theory emphasis was on key signatures, scales, and chord study with little emphasis on form and analysis, modes, and keyboard experience.

Mueller (1960) reported that two-thirds of the junior high schools in California (schools in the sample) did not provide teachers with a syllabus, and that less than one-third of the general music teachers used a textbook in their classes. The majority of the teachers devoted sixty percent of the class periods to singing, playing instruments, and listening to records. The other forty percent of the class periods was devoted to study of music fundamentals,

instruments of the band and orchestra, and composers and their music.

Peterson (1962), in a survey of academic music courses offered in Missouri high schools, reported that the activities used by an overwhelming majority of the instructors included: lecture, listening to recordings, discussion of text and reference book assignments, and written examinations. The period in music history most emphasized was from 1800 to the present time. The types of literature most emphasized were symphonic music, opera and oratorio, and American folk music.

Evaluation of Programs

Three studies were reviewed which were concerned with evaluations of the music program in the public schools. Two of the studies were devoted to evaluations of courses of study. The first of these, by Harlan (1940), used a check list built on ten criteria to evaluate seventy-eight courses of study in music. Thirty-seven states were represented by the courses of study. Harlan reported that the courses of study, taken as a group, ranked highest in literary construction, aims and objectives, and extra-curricular activities. They ranked lowest in lack of inclusion of a definitely stated philosophy. State courses were found to be superior to city courses of study, and secondary school courses were superior to elementary school courses of study.

Lotzenhiser (1956) also evaluated state courses of study and gave particular attention to courses in instrumental music. A check list, built on authoritative writings dealing with curriculum planning and course of study construction, was used in evaluating courses of study produced by twenty-seven states. Criteria on the check list dealt with philosophy, general objectives, specific objectives, organization and content, teaching procedures measurement and evaluation, bibliographic materials, continuing revision, and basis of formulation. Lotzenhiser reported that the strongest element in the courses of

study was items pertaining to the function and responsibilities of individuals and committees producing the courses of study. The weakest element was the provisions for measurement and evaluation of the aptitudes and achievements of individuals and groups. Guidance materials in the courses of study also were found to be inadequate.

Batcheller (1956) evaluated the music programs in the elementary schools of South Carolina. Criteria used in the evaluation were derived from current opinion and authoritative writings in music education. Data for evaluation were obtained from all principals (522) of white elementary schools in the state. The results of this evaluation indicated that: (a) South Carolina lacked state leadership and supervision in elementary school music education, (b) most teachers were inadequately prepared and the elementary schools did not have adequate equipment to teach music in the classroom, (c) most curricula for the elementary schools were not organized to incorporate music instruction in the program, and (d) the school principals were unaware of the standards and structures of an adequate, well-balanced music program for their schools.

An evaluation of the music programs in schools approved by the North Central Association of Secondary Schools was included in the status survey reported by Price (1950-1953). This investigator reported that generally these schools did not provide as many singing and listening experiences as recommended by competent authorities in music education, nor did they provide sufficient elective musical experiences for all students.

CHAPTER X

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

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SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

Problem and Objectives

The problem of this project was concerned with the lack of an organized body of research information in music education, the need for identifying research studies in a large body of literature, the need for synthesizing knowledges gained from competent research for use in the profession, and the need for the dissemination of such knowledges.

Although a large number of apparent research studies relating to music education existed in the professional literature, they had not been brought together or reviewed to determine their value to the profession or their status as research. They were not known to the profession at large, and generally were not available to music teachers in the public schools. In this scattered, unorganized, and unevaluated form, these studies were of little value, if any, to the music education profession.

It was the purpose of this project to bring together those research studies which had been completed between the years 1930 through 1962, to evaluate these studies, to synthesize the findings according to specific areas of function and methodology, and to indicate implications for current practice and needed research in music education. The year 1930 was selected as a beginning date because it was at approximately this time that the need for research in music education was being emphasized by leaders in the profession and reference to research reports began to appear with increasing frequency in the literature. Since the project work began in October of 1963, the year 1962 was accepted as the terminal year in order to insure that all documents completed during the terminal year could be reviewed and included in the project.

The specific objectives of the project were: (a) to compile a complete list of apparent research studies related to music education for the years 1930 through 1962, (b) to select, categorize, evaluate, and abstract relevant and competent research studies specifically related to basic problems in music education, (c) to prepare a synthesis of the findings according to specific areas of function and methodology in music education, (d) to identify unique research designs and trends in research in music education, (e) to indicate implications for current practices in the schools and the specific needs for further research in music education, and (f) to provide the Educational Research Information Center (ERIC), of the U.S. Office of Education, with index terms, abstracts, and microfilm of competent research in music education.

Procedures

The procedures employed in the process of identifying and synthesizing competent research studies completed during the years 1930-1962 and providing abstracts and microfilms of these studies for storage in the ERIC retrieval system, were as follows:

1. A list of titles of published and unpublished reports and documents in music education completed during 1930-1962 was compiled from 708 bibliographic sources (see Appendix E) and from a survey of 211 institutions of higher education offering graduate programs in music education (see Appendix F).
2. An operational definition of music education was developed which revealed music education to be a process or operation with certain identifiable elements (see Chapter II).
3. Criteria were developed and abstract forms prepared for determining the competency of reported research studies in music education (see Chapters II and III, and Appendix G).

4. Program Evaluation and Review Techniques (PERT) were applied to clarify procedures and time allotments in the operational plan of the project (see Chapter III).
5. A priority system for the procurement of apparently relevant documents from various sources of supply was devised (see Chapter III).
6. Available documents were evaluated for their relevance to the project definition of music education and for their competence as research. Each study which met the criteria for relevance and competence was categorized according to its content and placed in the categorical system which evolved from the project definition of music education (see Chapters II and III).
7. Competent studies were microfilmed in their entirety, an abstract was written, and index terms devised for use in the ERIC retrieval system (see Chapter III and Appendix H).
8. The findings in each major category were synthesized by sub-categories (see Chapters V, VI, VII, VIII, and IX),conclusions were drawn, and implications for practice and research were indicated (see following sections).

The definition of music education developed in the project stated that "music education is the practice of, the participation in, and the study of the process involved in the teaching and learning of music within the elementary and secondary school to fulfill three fundamental functions, namely, the transmission of the cultural heritage in music, the acculturation of the individual to his musical environment as a participant, and the development of the individual's aesthetic sensitivity." Major elements in the process of music education were indicated to be the teacher, the student, the teaching-learning process, and constraining factors to the process. The concepts and

rationale employed in the development of this definition are presented in Chapter II.

Major considerations in the determination of competence of research were the statement of a definite problem, an accurate and complete description of the sources of information, the adequacy of the methodology employed, the adequacy of the data to support the conclusions, and the degree of generalizability of the results. These criteria are specified in Chapters II and III.

The priority system for procurement of documents gave top priority to three types of documents: (a) published research reports, (b) unpublished faculty research, and (c) doctoral dissertations and projects. The assumption was made that the quantity of education of a documents author would be a relevant factor in the document's quality as a probable research report. Because most published documents were written by faculty members in higher education, published documents and faculty documents were considered to be most likely reports of competent research. Masters' theses were given the lowest priority because of the low level of sophistication believed to be typical of this type of document. The priority system was instituted when it became apparent that the number of research studies completed during the 1930-1962 period of time was much larger than had been estimated originally by the investigators. A complete discussion of this process is given in Chapter III.

The major categories under which the competent research was reviewed and the data synthesized were the teacher, the student, the teaching-learning process, constraining elements, and the music education program. The various sub-topics identified in each of these major categories and the types of research considered relevant to each category were delineated in Chapters II and III. A review and synthesis of the data provided by competent studies in each major category is presented in Chapters V, VI, VII, VIII, and IX.

Results

The results of the project were presented in the form of an analysis and evaluation of the research literature in music education, 1930-1962 (Chapter IV), and in a review and synthesis of competent research by the identified major categories (Chapters V, VI, VII, VIII, and IX).

The results of the compilation process produced a grand total of 11,810 titles of probable research studies in music education. Of this total number, 691 were titles of doctoral dissertations and projects, 9976 were titles of theses, 1043 were titles from published sources, and 100 were titles of unpublished reports. The titles of 2660 theses were found to encompass topic areas not relevant to the definition of music education. The 9150 titles remaining were considered to constitute all of the possible research related to music education which was completed during the years 1930-1962. This number of studies amounted to twice the number originally estimated (after a rough sampling) to exist in the literature.

Of the total number of 9150 possible research studies related to music education, 119 titles were found not to be available (see Appendix D), and 1818 studies were selected in terms of the priority system for review and abstracting. The 1818 studies reviewed and/or abstracted included (a) all available dissertations completed during 1930-1962 with the exception of 88 titles which were either obtained too late for procurement or which were not reviewed because the title definitely indicated a non-research report--handbooks, musical compositions, etc., (b) all available published documents produced during 1930-1962 with the exception of twenty-eight titles obtained too late for procurement, (c) all available unpublished documents with the exception of four titles obtained at the close of the abstracting process, and (d) a group of 212 theses selected either because they were known to be competent research or because the titles seemed to definitely indicate research

on topics related to music education. Not reviewed, because of the time factor (project completion date) and the resulting priority system, were 7093 masters' theses of which 3946 were believed to be related to music education, and 3147 probably related to music education in terms of information the teacher needs to know to function in the teaching-learning process. A categorical break-down of these studies are presented in Appendix C.

An analysis and evaluation of the studies reviewed and/or abstracted revealed that only 273 reports (fifteen percent) of the total number of reports reviewed (1818) could be considered relevant and competent research. Of the total number (1818), 1013 were judged to be relevant to music education but not competent as research, and the topic content of 532 reports, almost one-third of the total reviewed, was judged not to be related to music education.

Of the 591 doctoral dissertations reviewed, 182 (31 percent) were found to be both relevant and competent research; 240 dissertations (41 percent) were found to be relevant but not competent; and 169 (28 percent) were found not to be relevant to music education as defined. A similar status ratio was found in the analysis of the masters' theses: 40 theses (68 percent) were considered relevant but not competent; and 27 theses (13 percent) were considered not relevant to music education. Of the total number of graduate studies reviewed, only 222 (28 percent) were considered both relevant and competent. These studies were completed at 57 institutions of higher education.

Fewer of the published reports, as compared percentage-wise with dissertations and theses, were considered relevant and competent research. Fifty-one published reports (five percent of the total) were considered both relevant and competent; 610 reports (62 percent) were considered relevant but not competent; and 327 published reports (33 percent) were considered not relevant. The majority of the titles of published reports were obtained from references

in dissertations and theses. In these studies, the published reports were referred to as "related research" or research studies. Only fifteen of the fifty-one published research reports were published in six journals and magazines allied to the music education profession.

None of the unpublished documents was considered both relevant and competent research. Of the twenty-seven unpublished documents reviewed, eighteen were considered relevant but not competent, and nine were considered not relevant in terms of the concepts and definition utilized in the project. Sixty-nine unpublished studies, whose titles were supplied by music education faculty members, were found not to be available for review.

The research represented in the 273 reports considered to be both relevant and competent was generally of two basic types--descriptive and experimental. The largest number of competent studies (135) were of the survey-questionnaire type. Only two studies specifically concerned with philosophy were found which were competently performed. One of these was primarily an analysis of documents and critiques of the ideas of major thinkers, and the other was a survey of what philosophical system appeared to be functioning in selected school systems. Both of these were considered descriptive research.

The distribution of the 273 reports of both relevant and competent research in terms of the delineated categories of music education revealed that the largest number of studies dealt with problems concerning the music teacher, the music student, and the teaching-learning process in that order.

Major inadequacies found in the 1013 reports reviewed and classified as relevant but not competent research were of several kinds. In many cases the problem stated by the investigator proved to be different from that which was investigated. In some cases, the problem, objectives, or purposes were not clearly and succinctly stated and they had to be deduced by the reviewer. In

other cases, problem statements were only partially revealing of the scope of an endeavor. The most common inadequacy, particularly among doctoral studies, was the lack of competent investigation. The lack of validation of data-gathering instruments and techniques and the use of inappropriate or inadequate research designs were the major deficiencies of a technical nature. In some studies the information given and the data analysis were incomplete. In other studies, conclusions were inappropriate to the data, and statistical techniques were inappropriate to the design and sample. One study failed to list conclusions. A large number of these studies were mere collections of opinions and speculations. Others were reports of activities, lists of music or instructional materials, guidebooks for conducting certain types of activities, and proposed courses of study. None of these studies met the stated requirements of research.

The 532 studies classified as not relevant to music education as defined covered a wide range of topic areas. These are listed in Table XII. Almost any topic in music, education, or in other fields such as physics, for that matter, was considered at some time or other to be relevant to music education. The relationship to music education was not the major concern. Rather, the research was concerned with substantive knowledge in the topic area. It must be assumed that such topics were considered relevant to music education in that the research was accepted for higher degrees in music education, or it was so classified by the profession. These studies were included in the review process because the titles were thought to be related to problems in music education, they were so indicated in other research documents, and they were reported by music education faculty. The title of a study, in many cases, bore little relationship to the contents of the work.

The results of this project, in addition to the analysis and evaluation

of the research literature discussed above, consisted of the information obtained from the reviews and syntheses of relevant and competent research in the four major categories--the teacher, the student, the teaching-learning process, and constraining elements. (Reviews of competent research pertaining to the program in music education also were presented--Chapter IX, but this information could not be synthesized.) In order to avoid repetition and excessive verbiage, the results of the syntheses of information in these four categories are not given here. Instead, these results are given in the form of conclusions in the next major section of this chapter.

Conclusions

The analysis of the research literature reviewed in this project led logically to conclusions bearing on the status and evaluation of the research completed during 1930-1962. The review and syntheses of competent research in each of the major categories provided conclusions in the form of what knowledges seemed to exist in each of the various categories. Conclusions of each of these types are presented below under the headings, Status and Evaluation of Research, and Syntheses of Research.

Status and Evaluation of Research

The conclusions derived from an analysis and evaluation of research in music education, which are given below, relate only to that research reviewed in this project and that research completed during the years 1930-1962. A review of the remaining masters' theses in the project catalogue, which were completed during these years, might possibly alter the conclusions.

From an over-all analysis and evaluation of the research reviewed in this project, the following conclusions seem warranted:

1. Neither titles which indicate research, the types of reports (theses or

dissertations), nor the source of publication are indicative of reports of research in music education. Titles often bear no relationship to the contents or type of a report. An examination of a document indicated by title to be a possible research report is the only valid method for determining its relevancy and competency. Apparent research titles found in publication sources other than those allied to the music education profession are more likely to be reports of research than those found in music education publications. The only exception are those titles found in The Journal of Research in Music Education. This fact would suggest that either researchers sought publication sources outside of those allied to the profession, or that the professional publications, at least for some time, did not encourage publication of research reports.

2. Descriptive studies, usually of the status and survey type, constitute the majority of the research studies completed during the years covered in this project. This appeared to be a continuing trend from year to year. The questionnaire technique was widely employed. Usually, data obtained in such studies were not generalizable and did not indicate relationships or trends of value in other situations. The contributions of such studies are slight in terms of usefulness to the profession. There appears to be a slight increase in controlled experimental studies in these years.
3. Traditional research designs characterize the methods utilized in the research reviewed in this project. No designs were found which could be considered unique.
4. The relevant topics investigated in any area of music education can be considered little more than a sample of the multitude and complexity of the problems confronting the music education profession today. (see Implications for Research).

5. Much of the competent research completed during the years 1930-1962 raises questions which can be answered only through broader application and replication.

6. The large majority of research in music education is produced by graduate students working toward graduate degrees. Graduate research studies, as compared to published studies and unpublished faculty research, also produced the largest amount of relevant and competent research. This amount of relevant and competent research, however, is quite small when compared to the total number of graduate studies completed over these years. Graduate student research undoubtedly will continue to be the largest source of research data in music education. This will continue to be true until colleges and universities assign time to music education faculty for research activity.

7. The assumption that all, or even a majority, of theses and dissertations in music education are reports of research studies is not warranted. In many instances, as the data in this project revealed, theses and dissertations completed for advanced degrees in music education are not on topics relevant to music education, and they are not reports of research. A large number of these documents can be classified only as opinionated and spectulative essays.

8. The assumption that much of the relevant and competent research in music education is produced by college and university faculty in music education also is unwarranted. Only a very few faculty in music education are producing relevant and competent research. None of the unpublished faculty research reviewed in this project met the stated standards of relevance and competence. Some of the reports submitted as research were copies of speeches, course outlines, and lists of teaching materials.

9. Some confusion and misunderstanding seemingly exists in the music education profession as to what constitute relevant research topics in this area of study. This conclusion is supported by the wide range and diversity of topics found in the reports reviewed in this project and the large number of studies rejected because the topics were not considered relevant to music education. The acceptance by the profession, and particularly by faculty members guiding graduate research, of some set of perimeters for this area of study would appear to be an initial necessary step in the building of an organized body of knowledge in music education.

10. Some misconceptions as to what constitutes research also seem to exist in the music education profession. The profession generally does not appear to be knowledgeable of research concepts and techniques. This conclusion is supported by the types of reports submitted as research and the number of studies rejected in this project on the basis of competency. Many graduate student and faculty reports indicate this lack of sophistication. Training programs for the preparation of researchers and advisors of research projects, also would seem to be a necessary step in the building of an organized body of knowledge in music education.

Syntheses of Research

The conclusions stated below should be considered as tentative conclusions rather than facts or concepts the validity of which is beyond questioning. They are drawn only from that research completed during 1930-1962 which was reviewed in this project. Some conclusions are based on the results of single studies, or on a very small number of studies. Some studies were conducted in a different era of the American culture. The results of research since 1962 also might alter these conclusions or even contradict them. For these reasons, at least, the conclusions must be considered tentative and open to further re-

search and empirical testing.

The conclusions are given under the same major categories and sub-categories as utilized in the preceding chapters. Conclusions relating to more than one of the specified categories or sub-categories are repeated when this seems appropriate and necessary for complete understanding. In this framework, these statements also provide a summary of the results of the project as was indicated on a previous page.

I. The Teacher

A. Personal Factors

1. The attitudes of music teachers toward music education vary at different levels of education. Some evidence exists that less than fifty percent of high school music teachers choose school music teaching as their first choice of musical vocation. Among elementary classroom teachers and music teachers, a favorable attitude toward teaching music in the schools seems to be related to home musical environment, extent of experience in music, and the variety and quantity of previous musical experience. Elementary classroom teachers appear to be apathetic toward improving the music curriculum and their own music teaching skills. High school music teachers are interested in maintaining the status quo in regard to the kinds of activities offered but desire to do them better. College music educators wish to make basic changes. It seems evident that a relatively common attitude toward music education does not exist.

2. Attitude as expressed in job satisfaction appears to be related to intelligence, salary, and length of service. Dissatisfaction seems to be related to a misunderstanding of the maturity of the

students the teacher will teach, the quality of the music used, the dual task of teaching vocal and instrumental music, a variety of physical working conditions, peer and administrator attitudes toward music, financial support for music, and salary. The music teacher's temperament generally does not appear to be related to job dissatisfaction.

3. The musical ability of those who enter and continue in the profession is not different from that of drop-outs from the professional music education curriculum. No aptitude battery seems to differentiate between those students who are interested in teaching school music and those interested in other kinds of music vocations.
4. Music education majors appear to be as well adjusted as science education majors and physical education majors. However, they tend to have a somewhat lower personality formulation of how they appear to others than do science and physical education majors. Outstanding music teachers measure higher in self-sufficiency, permissiveness, and confidence than do teachers of lesser quality. Choral and instrumental music teachers possess comparable dimensions of temperament. The major causes for music teacher failure, however, are personality weakness, emotional instability, and tactlessness. It seems that personality is no more of a factor in the selection and retention of music teachers than in the selection or retention of any other teacher.
5. The value system of the music teacher tends to be feminine in terms of the American culture. His aesthetic values are dominant and economic values recessive. This creates a potentially difficult relationship between the music teacher and the administrator in that

the typical administrator has dominant economic values and recessive aesthetic values. This latter pattern also is true of the music teacher's colleagues in business and science education. The aesthetic values of male and female music teachers are practically similar.

B. Social Factors

1. Persistence in the profession, for men in particular, seems to be related to salary. Professional mobility is generally upward and is related to prestige, salary, opportunity, and working conditions.
2. No relationship seems to exist between teaching success at the public school level and membership in professional organizations or writing for publication. Evidently success in teaching is related to skills other than those necessary for these socially orientated professional activities.
3. Music teachers who remain in the profession continue their education. This may be due to two factors. One may be the requirement of further education as prerequisite for promotion and salary increases. The other may be a desire to obtain further education out of self interest.

C. Education

1. Existing selection practices for prospective music teachers are not valid. Most are concerned primarily with the musicality of the student. To a much lesser degree they are concerned with other elements such as personality, social behaviors, and general ability. No measure has been developed which will account for the non-musical variables which confront the teacher in the classroom and for which he must be educated. It seems, however, that successful music teachers are generally superior undergraduate students.

Personality structure is more of a determinant in a teacher's classroom behavior than the classroom environment.

2. Serious differences existed (as of 1962) in the quality of education between all-white and all-Negro teacher education institutions. These differences were in the areas of general curricular structure and, particularly, the minimum standards for musical performance. There are many institutions in several areas of the United States which fail to provide curricula which completely fulfill the criteria of the NASM and/or MENC.
3. Experienced music teachers indicate that there are areas in their professional responsibilities for which they have received little education. Deficiencies were indicated in the areas of interpersonal relations, administrative techniques, and in course work in psychology, methodology, and general music.
4. There appears to be a generally accepted body of knowledge which prospective, and even the experienced music teacher, is expected to know. For the most part, this body of knowledge is defined only in terms of areas of study and the length of such study. No information is available, however, on what specific knowledges or skills are to be learned or developed, and whether the teacher education curricula and the teaching techniques employed in those curricula achieve these ends.
5. Attempts have been made to establish criteria for determining the musical competencies an elementary education major should achieve. The validity of these criteria, however, is yet to be determined. The identification of what musical skills the elementary classroom teacher uses has not been clearly defined to the extent that

realistic criteria can be determined. The achievement of this goal would appear to be dependent on a clearer definition of the goals and objectives of music in the elementary school.

6. The adequacy of the preparation for teaching music in the elementary school curriculum is ranked very low by both men and women classroom teachers. Men rank this as their lowest skill.
7. There appears to be agreement that a music education major should have performance skill on more than one instrument. Typically, the piano is a required secondary instrument in the professional program with the attainment of functional skills as the objective for its study. These functional skills are most frequently (a) the sight-reading of hymns and songs, (b) playing simple piano accompaniments, and (c) harmonizing melodies. Many institutions require a piano proficiency test.
8. The quantity of stringed instrument instruction required in most music education programs varies from one to two semesters. The minimum level of competency reported as desirable is that of the skill of a ten-year-old child, a rather vague concept. Instruction in all four stringed instruments is provided by some institutions. Literature of fine quality which can be used with beginning groups is available for heterogeneous string classes at the college level.
9. The minimum requirements in conducting is generally one quarter or one semester of class work. Criteria for evaluating conducting skills have yet to be developed and validated. The type of experience provided in conducting classes includes either, or both, the conducting of standard works and/or music suitable for use in the school.

10. The skills needed in harmony and sight-reading by teachers appear to be vaguely conceived and without a common base in teacher education programs. There appears to be no relationship between a student's success in sight-reading and his previous musical experience. Contrary to traditional methodology, a multiple sensory activity in learning to sight-read appears to be more effective. A self-instructional program seems to be as effective in the learning of musical dictation as traditional methods. The content of harmony courses does not appear to be realistically oriented in terms of the skills a music teacher needs in the public schools.
11. There is little valid information on which to project expectations for teaching competence at the undergraduate level. It is known that the self-concept of successful student teachers is similar to the self-concept of successful teachers in a professional status.
12. The student teaching experience typically includes teaching at more than one level of education. The quantity of student teaching experience and quantity of supervision by the institutional staff seems to be related to the size of the institution offering student teaching. There is some doubt that smaller institutions should attempt music teacher education. Regardless of the size of the institution, there does not seem to be a consistent pattern in terms of student teaching credit allocations. No generally accepted criteria appear to exist for selecting prospective teachers, or for determining prerequisites to the student teaching experience. Also, no method for predicting the success of a student teacher has been found. Success in student teaching is frequently based on criteria which are unrealistic to the actual teaching situation.

A lack of information exists relative to evaluative criteria for differing social situations in which music teachers may find themselves.

D. Professional Competencies

1. A majority of elementary school classroom teachers appear to be providing all the music instruction in their classrooms, but the number who have this task seems to be decreasing. The kinds of difficulties which these teachers have in teaching music are of the same pattern regardless of their educational background, teaching experience, or whether or not they are assisted by a music supervisor. There appears to be a strong relationship, however, between the amount of musical training and the use of various music teaching activities.

2. Elementary school classroom teachers consider their musical skills generally to be inadequate to their needs. Three major musical abilities appear to be needed by the teacher in the elementary school--pianistic skills, singing, and sight-reading. Teachers with pianistic skills feel more adequate to their tasks. It is evident that these three abilities are approximately the music core for the professional education of the elementary school classroom teacher.

3. The responsibilities of the music teacher vary with the size of the school system. In small school systems the music teacher has multiple responsibilities which often include the design of the curriculum and activities. The music teacher tends to emphasize in the music program under his direction his own musical interests, i.e., a teacher who is an instrumentalist will develop a strong instrumental program among his several responsibilities.

4. The lack of knowledges and skills which seem to be of primary concern to music teachers and their administrators are mostly non-musical in character. These include knowledges as to the nature of the student, student control, comparative teaching methods, supervisory practices, philosophies of group dynamics, and interpersonal relationships. It is in these areas that music teachers are rated as deficient not only by themselves but also by administrators. The non-musical skills in teaching are most frequently listed as more important to effective teaching than musical skills. There is little difference in the deficiencies of teachers in large and small communities.
5. The musical skills of music teachers seem to be viewed differently by the various personnel in education. Administrators consider musical skills as least important in the causes of music teacher failure. The ratings teachers give their own attainment in musical skills is lower than that given them by their college teachers. Music teachers rate some skills as desirable and yet indicate they are neither needed nor useful in teaching music in the schools. It seems that a lack of realism or agreement exists at all levels and in all aspects of the profession concerning these competencies.
6. The musical deficiencies which music teachers indicate include knowledges and techniques for teaching singing to boys during the changing voice period, knowledges and performance on the various band and orchestra instruments, skill in the use of music in the classroom, and teaching techniques for music appreciation and creative activities.
7. Some agreement appears to exist in terms of the instrumental com-

petencies needed by secondary school music teachers. In stringed instruments, a recommended minimum proficiency is the skill attained by a ten-year-old child in one year of instruction; in clarinet, the equivalent of an intermediate method book and all fingerings, proficiency in the high register, common key scales and arpeggios, and mastery of tonguing and slurring; in flute, the equivalent of the completion of an elementary instruction book including the range C^1 to G^3, scales and arpeggios in the common keys, and tonguing proficiency; in oboe, the equivalent of the completion of an elementary book at slow tempo, knowledge of all common and chromatic fingerings with a usable range to D^3, and the ability to articulate the various styles of tonguing; in bassoon, the equivalent of the completion of the first half of an elementary method book, common fingerings, and the ability to choose which auxiliary fingering is best suited to a musical problem.

8. If the practices of music teachers are indications of what kind of preparation should be provided them, then college music theory courses must be modified. Only a small percentage of the music teacher population composes music while a large percentage makes alterations in instrumental parts or even writes alternate parts. The skills of reading choral and instrumental scores at the piano and silently are essential for the purpose of selecting music or studying music for rehearsal preparation. These skills are not typically taught in music theory courses.
9. The qualifications which a teacher must meet for certification vary among the several states. There are wide ranges in these qualifications such as a range of eighteen to eighty-two semesters hours in music instruction at the college level.

II. The Student

A. Personal Factors

1. Children, by and large, evidence a positive attitude toward music experiences in the school, but seemingly a decline in favorable attitudes toward music occurs as grade level advances. Girls generally show a more favorable attitude toward music than boys. Out-of-school experiences appear to be more dominant in the development of positive attitudes than do music experiences in the school.

2. The attitudes of elementary school children toward music do not seem to be related to the type of music teacher--classroom teacher or music specialist.

3. There is some indication that a large majority of high school students would rather participate in music listening activities than in music performance activities. High school students alsc may not be too receptive to the types of content or teaching techniques used in music. Some evidence exists which suggests that high school students may not be interested in songs that would be sung after completion of high school, correlating music with other subjects, or in instruction designed to demonstrate poor examples of popular-commercial music.

4. The assumption that common experiences will result in common aural perceptions by high school students does not appear to be correct. The meanings of sound seem to be based, to some extent at least, on subjective unconscious factors. Intellectual activities also may be a hindrance to aural perceptions.

5. The characteristics of outstanding high school musicians include

a wide range of musical interests and preferences, high intelligence and achievement, and leadership qualities (hold more offices and earn more awards).

6. The special chracteristics of adolescent boys' voices before voice change (high-low range, light or heavy quality, flexibility and agility, tessitura) seem to continue into the changed voice. Singing during the period of voice change does not appear to be harmful to the voice and may be beneficial in improved singing ability.
7. There seems to be a positive relationship between intelligence, musical aptitude, and musical achievement. Intelligence and academic grades are better predictors of achievement in music than musical aptitude test scores. Intelligence appears to be the most important single variable in predicting success in instrumental music. It does not appear, however, to be an important variable in the selection of a specific musical instrument for study.
8. There appears to be a difference in temperament (emotional traits) between outstanding high school musicians, high school musicians of lesser talents, and high school students not participating in music activities. Outstanding male high school musicians appear to be less stable emotionally, less objective, less adept in personal relations, and less masculine in interests than their less talented colleagues. Outstanding female high school musicians seem to be less restrained, less friendly, and less adept in personal relations than their less talented counterparts. High school music students, as a group, seem to demonstrate a

high degree of self-confidence, ambitiousness, and self-assertiveness. Some evidence exists which suggests that high school students scoring high in musical aptitude project more affective responses (TAT) than those who score low. High school students who indicate a preference for popular-commercial types of music appear to be somewhat less neurotic, less self-sufficient, and more extroverted than those favoring art music.

9. There appears to be no support for the notion that children (elementary school) rated high in musical (or art) ability are more abnormal than those rated low in musical ability. In fact, those rated high in musical ability appear to be better adjusted.
10. A wider range of musical interests and greater preference and interest in more serious types of music seems to characterize outstanding music students. A strong relationship also appears to exist between music grades and interest in school music, private music lessons, and amount of out-of-school activity in music. The factor of interests as affected by the lack of divergency of instruction in high school music classes, appears to be a major reason why academically talented students withdraw from school music activities. Students also are more interested in band classes than in any other type of instrumental activity.
11. The motivation accruing from environment and attitudes in the home toward music seems to be strongly influential in encouraging students to study a musical instrument.
12. Motivational factors which are of some value with below-average adolescents in the general music class appear to be peer approval, interest, curiosity, working for tangible rewards, and competition.

13. Musicality, by itself, as measured by music aptitude tests, does not appear to be a satisfactory predictor of achievement in music (see item 7 above).

14. No difference in the distribution of music aptitude appears to exist between urban and rural children and children in different regions of the United States. Children from different national and racial origins also seem to be equally endowed in terms of musical aptitude.

15. Pitch discrimination errors made most frequently by elementary school children seem to occur on ascending fourths, fifths, sixths, and minor sevenths, and on descending thirds, fourths, fifths, and minor sixths. Practice in matching given pitches vocally and on the piano appears to facilitate the development of aural discrimination in elementary school children.

16. The aesthetic sensitivity of high school musicians seems to be comparable in many respects to that of composers. Visual design stimuli presented to high school musicians suggested themes with characteristics similar to those suggested by composers. A moderate relationship seems to exist between aesthetic sensitivity and musical ability. Some evidence exists that aesthetic judgements could be used to differentiate between persons known to be musical and those observed to be less musical. No relationship appears to exist between the aesthetic sensitivity of students and socio-economic status.

17. The vocal performance range of children up to the age of ten years occurs within the range from first line E to fourth space E of the treble staff. A large portion of the potential pitch (vocal) range appears to be developed during the first three grades.

18. Children in the early grades of the elementary school find it easier to keep time to music played at fast tempos than to music played at slow tempos. Little difference seems to exist in the ability of beating time with the hands and marching in rhythm. Elementary school children appear to be quite consistent in their groupings of rhythmic patterns with accents. The grouping seems to be dependent on the configuration of the entire pattern and the relative position of long and short notes.
19. Little relationship seems to exist between motor skill and music performance ability.
20. Neither physical characteristics (eveness of teeth, taper of fingers) nor intelligence appear to yield valid data for use in the selection of a musical instrument for beginning instrumental music study. The controlled try-out method seems to be the most suitable technique for determining specific instrument aptitude.
21. Personality does not seem to be a significant variable in adolescents' preferences for either popular or art music. High school students as a group who indicate a preference for popular music appear, however, to be somewhat less self-sufficient and more extroverted than the group favoring art music. High school music students appear to reveal a higher degree of self-confidence, ambitiousness, and self-assertiveness than do non-music students. Some evidence exists which suggests that children classified as monotones exhibit inadequate social and emotional development.
22. Popular-commercial musical selections seem to be most acceptable to all teen-agers without difference in sex, age, socio-economic status, or amount and type of music study. "Song plugging" does appear to increase the acceptability of initially less well-liked

songs. Preference for classical types of music seems to increase with age, particularly at the college level. Classical music preference differences between age, sex, or socio-economic status, appears to be largely a function of the transmission of specific judgements about specific compositions.

23. The decrease of orchestras in the schools does not seem to be related to students' tonal preferences. Some evidence is available which indicates an aesthetic tonal preference by high school stuents for music played by an orchestra rather than that played by a band.

B. Social Factors

No significant relationships appear to exist between participation in high school instrumental music activities and socio-economic status, religion, family size, or nationality. Relationships between music preferences, aesthetic sensitivity, and socio-economic status seem to be negligible.

C. Education

1. A definite relationship seems to exist between academic average, music grade average, musical aptitude, intelligence, and musical achievement. Musical achievement seems to be a significant factor in the development of positive attitudes towards music. Instrumental music students, as a group, appear to have higher grade averages, intelligence, and music aptitude scores than do vocal music students. Musical aptitude does not seem to be as important as intelligence and academic grades in predicting musical achievement. Some evidence suggests that grades in certain junior high school subjects can be used for predicting musical achievement at the high school level.

2. Successful achievement in instrumental music performance at the fourth grade level appears to be influenced by the general motor development of the individual student. Achievement in beginning instrumental music performance (fourth through eighth grade) does not seem to correlate significantly, however, with physical growth.
3. The number of high school students participating in musical activities appears to be related to the number of periods in the school day, the coordination between the elementary and secondary school music education programs, and the existence of community music groups. The sex of the teacher, amount of credit given for musical activities, awards, summer programs, social events, booster clubs, fees, and publicity, seem to have little or no influence on the number of participants. Private piano lessons do not appear to be a major influence on later vocal or instrumental activity in the schools. Academically talented students withdraw from high school music activities because of the demands of college preparatory courses, the lack of divergency of instruction in high school music classes, and out-of-school conflicts between music and other activities.

D. Post High School Activities

1. Participation in school music activities seems to carry over to a large degree in participation in adult music activities. The quality of musical experiences received in high school appears to bear some relationship to the interest shown in later years. Neither the amount of experience in high school music nor the ownership of an instrument appears to be a significant factor in adult participation. Adults not participating in music activities,

however, are often those whose musical instrument during high school was selected by the music teacher.

III. The Teaching-Learning Process

A. Transmission of the Culture

1. Literature from the English madrigal school and from the choral works of Orlando di Lasso are suitable for average high school choral groups.
2. Literature for brass ensembles of various kinds does not contain much contrapuntal writing in the easier grades of music, but contrapuntal styles of composition increase as the difficulty of the music increases. Symphonies of the classic period are suitable for adaptation and use by school orchestras.
3. Song compositions of contemporary composers are not suitable for elementary school music texts because of range requirements, extended periods of high and low tessituras, fragmentary melodies, and subtleties in music expression.
4. The type of presentation of recorded music to junior high school students appears to have little effect on student enjoyment of music. Enjoyment of lively orchestral music in the classic tradition seems to increase with repetition of the same type of music, while enjoyment of slow orchestral music in the romantic tradition seems to decrease with repetition. The use of program notes by junior high school students does not seem to enhance their ability to recognize musical themes.
5. Explanatory comments and group discussion appears to be a more effective method of presenting music literature in high school music classes (appreciation and music recognition) than listening

without discussion.

6. Conflicting evidence exists as to the value of the use of instruments in the elementary classroom music program in terms of achievement in theoretical knowledges and skills (notation and audio-visual musical discrimination).
7. Radio music lessons for high school students appear to be as effective in terms of developing theoretical knowledges of music as the usual classroom approach.
8. Adolescent boys, during the changing voice period, appear to gain more theoretical knowledge of music and to improve more in singing when placed in music classes by themselves.

B. Acculturation of the Individual

1. The development of music listening ability (aural discrimination) in elementary school children appears to be enhanced when children are trained to match pitches given vocally or from the piano. The space-frame concept of having children match tones while playing the same tones on the piano and observing the tonal relations also appears to be an effective technique for developing tonal memory. There appears to be no significant difference in the development of music listening skill between teacher-directed classroom activity and student-directed classroom activity. The attitudes of children towards music seems to be more positive when the student-directed activity is used.
2. There appears to be no significant difference between methods employing chords as separate units, chords related to compositions being studied, or a combination of these methods, in the development of harmonic listening skills in high school students.

3. Tachistoscopic training in music reading (melodic sight-singing and rhythmic sight-reading) appears to be a more effective method of teaching music reading in the elementary school than the more conventional classroom methods. There is some indication that children above the average in music aptitude and intelligence benefit most from training of this kind at least in terms of melodic sight reading ability. The space-frame technique (see 1 above) also appears to be an effective technique in teaching music reading to elementary school children. The music reading skills of school children do not seem to be enhanced by learning songs from recordings, through specially spaced notation, or through study of a musical instrument.
4. The solfege method of teaching music reading does not appear to be as effective as other methods (above) of instruction. Evidence exists that high school students and adults (active in music) do not consider the solfege method primarily responsible for the development of their music reading skill. The use of this method also seems to have some effect on the development of desirable positive attitudes toward music in the schools.
5. The eye movements of superior sight-readers in music reveal a shorter fixational duration, fewer fixations, and a larger perceptual span. A larger percentage of instrumentalists than vocalists seem to be superior sight-readers. Available evidence suggests that few high school choral directors consider music reading to be an integral part of the choral rehearsal. The over-emphasis on preparation for performance in choral music seems to limit the time devoted to music reading.

6. The seventh or eighth grade level appears to be the time when optimum maturational conditions are present for beginning the purposeful study of instrumental music in the public schools. A direct relationship appears to exist between physical maturation and musical progress on an instrument. No evidence exists as to the optimum time, psychologically, for beginning the study of an instrument in the schools.
7. Criteria for the recruitment of students for instrumental study generally are based on music aptitude, interest, and personality. The level of intelligence appears to be the best single predictor of achievement in instrumental music.
8. Neither intelligence, musical aptitude, nor physical measurements appear to be valid predictors for the selection of specific musical instruments. The controlled try-out method appears to be the most effective technique for determining specific musical instrument aptitude. Achievement in simple melody wind instrument playing (tonette) does not seem adequate for determining instrument aptitude.
9. Interest in playing an instrument seems to be related primarily to favorable influences existing in the home and the desire to play in the school orchestra or band.
10. Conflicting evidence exists as to the role and value of overlearning and reminiscence in delayed performance in instrumental music.
11. Negative practice (playing errors) on band instruments does not appear to be an efficient method of learning. Less intelligent students seem, however, to make fewer errors after negative practice than do more intelligent students.

12. Preliminary training in rhythmic response with drum pads and sticks and melodic training on simple melody wind instruments (tonette) along with heterogeneous class instruction on band instruments appears to be a more effective method for instructing beginning instrumental students (at the fourth grade level) than heterogeneous class instruction by itself.
13. Class instruction for beginning piano students in the age range of six to nine years appears to be just as effective as individual private instruction.
14. The major teaching problems identified by high school choral directors include dealing with strident nasal tone, diction, vowel consistency, accurate pitch, blend, music reading, and teaching understanding of interpretation elements and style.
15. There apparently is no significant difference in the effectiveness of learning choral music, when measured through performance, between the so-called mood method, rhythmic method, and the conventional method of instruction.
16. Class voice instruction for beginning high school vocal students appears to be as effective, or more effective, than the conventional private lesson approach.
17. The development of the minimal motor muscles to greater specificity through the use of exercises based on a biological and phonetic knowledge of the human voice, appears to produce improved tone quality, more normal vibrato, fuller resonation, and a higher degree of selectivity in articulation.
18. Singing during the period of voice change does not appear to be harmful but beneficial to the development of the boys voice.

Adolescent boys voice range is greatest before the change. Boys involved in the voice change process seem to enjoy singing songs in the bass clef and with the falsetto voice. Some evidence exists which suggests that boys improve in musical ability, in attitude, and interest in music if segregated from girls (special class) during this period of changing voice. Music, selected for use in the schools after the voice change, generally is not suitable for a large percentage of boys because it exceeds their range capabilities.

19. The vocal performance range of children up to the age of ten years occurs within the range from first line E to fourth space E on the treble staff. A large portion of the potential pitch range (vocal) appears to be developed during the first three grades. Some evidence exists that young children in the primary grades set the pitch level for a song significantly lower than the published level even after repeated practice using the published level.

20. Elementary school children seem to learn songs in a rote fashion more quickly from recordings than from instruction by the classroom teacher. Children also seem to prefer the recorded voices of women and children. Learning songs from recordings does not seem to enhance the music reading ability of elementary school children.

C. Aesthetic Sensitivity

1. Elementary school children seem to prefer songs with strong melodic movement, well-defined cadences ending on the tonic, major modes, primary chordal background, and dynamic variations. Disliked songs appear to be those possessing words not in

keeping with interests, a static melody, frequent use of the tonic tone and triad, imperfect authentic cadences, ending tones other than the tonic, and accompaniments which repeat the melody. The popular-commercial type of music is the preferred type. This preference seems to intensify as students increase in age.

2. Conflicting evidence exists as to the value of instrumental activities (classroom music program in the elementary school and the general music program in the junior high school) in the development of aesthetic sensitivity and appreciation. Instrumental activities--playing the autoharp, toy orchestra, listening to instrumental recordings--do appear to increase interest in music.

3. The musical taste level of high school students, as measured in terms of music preferences, does not seem to be greatly affected by the amount and/or types of musical experience in the school. High school students show a predominant interest and preference for the popular-commercial types of music currently in vogue. An inconsistent change toward classical types of music seems to occur at successive levels of maturity, particularly at the college level. Classical preference differences between age, sex, or socio-economic status apparently is largely a function of the transmission of specific judgements about specific compositions. Attendance at educational concerts by professional orchestras evidently does not effect statistically significant changes in the musical taste of junior and senior high school students. Some evidence exists, however, which suggests that a large portion of high school students exhibit an aesthetic tonal

preference for music played by an orchestra rather than that played by a band.

D. Undifferentiated Concepts

1. The organization of activities and materials into broad units of instruction (resource units) in the general music class at the junior high school level appears to produce a high level of learning and effective teaching.

2. Some evidence exists that parents and teachers (non-music) believe that greater attention should be given to general music activities and less attention to the specialized music groups in the high school.

IV. Constraining Elements

A. Administration and Supervision

1. The relationship of the music education organizational structure to pupil achievement and, therefore, the success of music education, is yet to be established. A vertical, unified administrative structure seems to be preferred. The various roles in music administration at all educational levels seem to be vaguely conceived. This lack of direction may also indicate an equally vague concept of objectives for music in the schools. Large city systems typically have a chief administrative officer for music. In small school systems the problem of administrative structure and roles is solved typically by giving complete responsibility for music education to a music teacher. In large systems, elementary school music administration responsibilities seem to be given to an assistant to the chief school officer.

2. State departments of education which employ a music supervisor

or director generally provide a variety of services to schools and teachers. These services range from providing instructional literature and materials to the conducting of in-service workshops. Whether or not state departments of education have an official organization for music, they seem to be involved in all aspects of the music education program. In some states the involvement is only indirect through prescription of curriculum and teaching materials. There appears to be little agreement between states concerning curricular offerings. This may be indicative of a lack of common objectives for music in the schools. Administrative and supervisory practices at the state level do not appear to follow any pattern. While a complete census of the states had not been taken by 1962, the indications are that a state level official did not exist in many states.

3. The effect of local administrative structure and practices on pupil achievement seems to be evident only in small school systems. Few schools seem to offer a variety of musical experiences appropriate to the variety of student needs. Most secondary schools make musical achievement possible only in performing groups. Among these groups, the orchestra has decreased in importance. Studies on supervision at the local level reveal that it is not enough to train a supervisor. Teachers who are served by a supervisor need training in how to use what a supervisor has to offer them. A supervisor's ability to provide leadership is directly related to the role constraints placed on him by policies and administrative practices. Economic status of the community also is an influence on the quality of supervision, but affluence is not a guarantee of quality.

4. The kind and quantity of curricular offerings in a school or a school system seem to be related to both external and internal factors. External factors and constraints are such factors as state laws governing curriculum and materials. The internal factors are such constraints as budgetary allocations, the provision of physical facilities and equipment, scheduling, non-school activities of students, and definitions of administrative responsibility in music.
5. Faculty loads in music appear to be greater than that of faculty in other instructional areas in the schools. Typically, music teachers have twenty-eight to thirty periods of student contact per week and they report over fifty hours per week total assignment time.
6. Time allocations for music do not vary greatly. In the elementary school the following approximate time allocations are found: classroom music--one-hundred minutes per week, instrumental music--two periods per week, and choral music--two periods per week. In the secondary school, superior musical groups are generally allocated five periods per week, and other groups two periods per week. The band and chorus are offered by all schools with few exceptions. Less than half the schools offer orchestras. The percentage of orchestras increases as school size increases.

B. Community Influence

1. Music teachers apparently harbor misconceptions of what parents desire for their children in the form of musical experiences. A consumer rather than a performer apparently is the parental goal. As in other areas of school activities, vociferous minorities may be forcing the continuance of the highly specialized performance

orientated music program. Pressures of this kind are withstood more easily by administrators in school systems where explicit rules for participation in such activities have been devised by the school board. The most frequent pressure group on school music is parents. The most effective pressure is "felt" pressure. The most easily met is direct criticism. It should be noted that the concern about pressures is in relation to the secondary school and not the elementary school. No strong community influence on elementary school music seems to exist.

2. Although community youth concerts provide school children with an opportunity to gain in their appreciation of music, these concerts do not seem to influence their musical taste. The value of such concerts must lie in other areas. Participants in community music activities generally have received much of their musical background from music experiences in the schools. If participation in community activities as an adult is a criterion, then school music must be accepted as a successful enterprise for these participants.

3. The wealth of a community can be a source of support in elementary school music. However, there is no guarantee that a wealthy community will provide a basis for an excellent elementary school music program. There appears to be a tendency , however, for more affluent communities to provide greater financial support and better supervisory services.

C. Philosophy

1. Little specific thought has been given to the arts, and music in particular, in education. There appears to be agreement that mere

association with the arts is not enough in an educational sense, and that a rational or disciplinary approach to the arts is necessary. It is evident that a philosophy of music education, in the sense of a systematic philosophy, does not exist. It follows that the success of music in the schools will be measured in terms of immediate results until such a philosophy is developed.

2. The philosophy which seems to prevail in self-contained classroom music instruction is pragmatism as expressed by Dewey. The most influential executant of this philosophy in the elementary school is the classroom teacher. The administrator's most important contribution seems to be providing equipment. Contrary to the tenents of pragmatism, elementary school music does not seem to be orientated toward the community, but has some other orientation which, as yet, has not been defined.

3. There appears to be little agreement between various levels of education, and between persons holding different positions in education, concerning the objectives and the methods for achieving the objectives in music education. It seems that a common base of information and philosophy is absent among those directly and indirectly involved in music education. This is born out in practice in that music for every child is propounded, but the non-performer may receive no musical education beyond the seventh grade.

D. Teaching Aids

1. The use of films for the teaching of information about music appears to be more effective than the use of traditional lecture-discussion-recitation methods. However, the use of films to

teach musical taste or aesthetic values to elementary school children does not seem to be efficacious. No generalizations and no criteria exist for making decisions about the educational efficacy of specific films at various levels.

2. The recordings which accompany song books provide the classroom teacher with an adequate aid for teaching rote singing when the material being taught is technically beyond the capabilities of the teacher.
3. Television programming must be carefully designed for relevance to the classroom endeavor. The consistency of program content and the supplementary materials is essential for optimum learning conditions. The most severe inadequacy in music programs on television is the fidelity of sound. Because of the fundamental nature of the musical experience, the sound factor raises a serious question about the appropriateness of television as a medium for musical instruction.
4. The size of a school does not appear to be related to the quantity and variety of visual aid materials. Likewise, the quantity and variety of these materials in a school is not a guarantee of the teacher's use of these materials in the school. Typically, the piano and phonograph are standard media used in music teaching. It seems that music teacher education does not include sufficient training in the use of the numerous media available and their peculiar values in music instruction.

Implications

Practice

The statements of implications for practice, given below, are derived

from findings which lend themselves to projections. They are not intended to be all-inclusive. Rather, they are considered to be some of the major implications which may be drawn from the data found in the research completed during 1930-1962 and which was reviewed in this project. The alert reader, on review of the conclusions and the chapters synthesizing the research, will find other implications for these data.

Some implications are based on the results of single studies or on a very small number of studies. It is realized that individual studies, competently done, often may not be used safely as a basis for drawing conclusions for practice. The data from any single study, or even a small group of studies, are limited by the particulars of the research design. These limitations are further compounded by a lack of knowledge (on the part of a reviewer) of all the details of a particular study and the realization that any behavior or event exists in a complex context. Even so, implications drawn from a single study or small groups of studies may suggest new directions for consideration by the profession.

Applied implications are pointed out for those studies which appear to have obvious utility. In other cases, the implications are presented in a form to suggest new ways of thinking about problems. This type of presentation may give a new perspective to problems and may assist in the translation of an implication to other problems or situations.

The statements of implications may serve other purposes. They may make explicit some of the assumptions that guide practice. They may suggest that some assumptions have not been subjected to study, or that the data are inconclusive. Also, they may provide the practitioner with the opportunity of gaining a broad view of the possible implications from research for the music education profession.

The specific implications which follow are given in the same major outline form as utilized in the preceding section.

I. The Teacher

A. Personal Factors

1. If music is to be taught in the schools by teachers who prefer, to some extent at least, another music vocation, and by classroom teachers who are generally apathetic toward musical experiences for children, then it would seem that the content and process of teacher education would need to be designed to account for these realities.

2. Reduction in job dissatisfaction would seem to be dependent on realistic teacher education in the character of the adolescent and pre-adolescent and their capabilities in music. It would be further dependent on a reasonable teaching load, the existence or development of a positive school attitude toward music, adequate working conditions, and a budget to meet the music teachers curricular responsibilities.

3. In the selection and retention of music teachers, ability, aptitude, and interest in music are not adequate criteria alone. Other typically human qualities such as personality, tact, and emotional stability also are important. Some measure of these traits needs to be incorporated into the selection procedures used with prospective music teachers in college music education programs.

4. The prospective music teacher should be informed of the different value systems seemingly held by music teachers (dominant aesthetic values) and administrators (dominant economic values) so that the music teacher can intelligently and realistically establish positive

working relationships with administrators, colleagues, and even students who hold generally non-aesthetic values.

B. Social Factors

If remaining in the profession correlates with continuing education for the music teacher, then it would seem that school systems should encourage and possibly assist music teachers in furthering their education.

C. Education and Professional Competencies

1. Implications for the music education major program at the college level would seem to require that:

a. The objectives for music teacher education need to be defined. A wide variation exists in terms of music teacher education requirements. This seems to be a responsibility of the profession and not restricted wholly to college or state levels of decision making.

b. Curricula for the prospective teacher of music should contain experiences which would provide understandings and insights into interpersonal relations, administrative techniques, and various psychological knowledges of human behavior and instruction. Identification is needed of the non-music variables which confront the teacher and in which he needs to be educated.

c. Mutually acceptable standards and objective criteria need to be developed by the profession for the evaluation of the performance skills of music education majors. A lack of realism in this area of preparation appears to exist throughout the profession.

d. The content of theory and harmony courses for music education majors needs to be redesigned in terms of the knowledges and skills needed by the music teachers in the schools. Teachers are not composers and they may need theoretical knowledges of a different type than that provided for developing composers.

e. Criteria for the evaluating of conducting skills need to be developed and validated. The amount and type of conducting experience provided in music teacher education programs appear to be inadequate to the needs of music educators.

f. The professional curriculum in music education should give greater attention to problems of the child voice, secondary instruments, and administrative and curricular problems.

g. College teachers of prospective instrumental teachers must develop some technique for combating the reluctant attitude toward the teaching of stringed instruments which seems to be held by a majority of undergraduate music education majors.

h. Consideration should be given to the self-concept and the shift in self-concept of student teachers as a part of the evaluation procedure in student teaching.

2. A greater quantity of education in music for elementary education majors seems necessary. Elementary school classroom teachers generally consider their musical skills to be inadequate to their needs. If music in the elementary school is generally allocated only one-hundred minutes per week, the classroom teacher needs to be extremely competent if the musical experiences provided are to be worthwhile. A more definitive identification of the skills needed by elementary classroom teachers and of the objectives of music in the elementary school is definitely needed.

II. The Student

A. Personal Factors

1. Music teachers should experiment with new techniques, concepts, and activities in their class work in an attempt to keep the interest of the student in music at a high level. Particularly, they should attempt to determine if the lack of interest in music, which seems to increase progressively with age, is related to the activities and techniques employed in the school music program.
2. The interest of a majority of high school students in music listening activities, and the greater interest in classical types of music which seems to begin to develop during the last years of high school, would seem to indicate that classes in music literature, appreciation, etc., should be available in the high school curriculum for these students. Instruction in these classes should probably be on the reflective level since it appears that common listening experiences do not necessarily result in common aural perceptions. Facilities for individual listening (libraries, study halls) also should be made available to high school students.
3. Music teachers should not operate on the assumptions that differences in musical ability exist between races, national groups, urban and rural children, socio-economic status (see Social Factors below), sex, or religion. Musical ability appears to be normally distributed throughout the population without respect to these variables.
4. Singing experiences should probably be emphasized in the primary grades of the elementary school since this appears to be the time when the vocal range develops most rapidly.

5. Rhythmic activities in the primary grades should probably employ music in fast tempos. Primary grade children find it easier to respond rhythmically to lively tempos than to slower tempos. Also, clapping the hands to rhythm is as easy for these children as marching in rhythm.

6. The eveness of teeth, thickness of lips, and taper of fingers of beginning instrumental students, do not seem to be crucial factors in the selection of an instrument for study. Instrumental music teachers should give greater attention to how the child is able to handle and operate a specific instrument. If all children are to have the opportunity to learn to play an instrument, and if the tryout method is the most valid technique for instrument selection, it would appear then that each school should have a supply of instruments for this purpose. The "try-out" aspect of instrumental music could very well become a part of the elementary school classroom music program.

B. Social Factors

While no significant relationships appear to exist between ability and participation in music and socio-economic factors, current social phenomena, particularly in large urban areas, suggest that socio-economic factors may affect abilities and interests in music of many children from these city areas. Lack of sensory stimulation seems to dull the sensitivity for music. Elementary classroom teachers in such urban areas may need to re-structure their apporach to music teaching, at least in the primary grades. Bombardment with musical stimuli of various types might be a desirable method for building sensitivities to sound. Little is known of this phenomenon as it relates to music. This is a fertile area for research.

C. Education

1. Greater reliance should be placed on intelligence test scores and academic achievement in selecting students for specialized study in music. It seems that these two factors, combined with musical aptitude and motivation, are the most valid measures for predicting success in music study. The attitudes and activities in the home involving music, which appear to be strong motivational influences, should also be given consideration if students are in fact selected for music study.

2. Since it appears that outstanding high school musicians rank high in intelligence and have a wide range of interests in music, it would seem that current typical programs, teaching techniques, and activities would need to be revised if these students are to be provided with the type of education in music they desire, and if they are to be retained in the music program. Teachers should evaluate the high school music program in terms of how well it provides for the highly intelligent and interested student. Many students of these types are not interested in playing the same music each year, performing the same programs, or giving their evenings for activities they have done many times before. They appear to be too sophisticated for acceptance of these types of redundancies.

3. Since popular-commerical types of music are accepted by all students, and since mass media of communication will apparently continue to program these types of music, little attention and use should be given these types of music in the school music program. This may be a difficult transition for those schools whose music

programs are geared almost entirely to satisfying the tastes of the community. The school music program, however, should function primarily as an educational activity and only secondarily as a means of community entertainment.

4. Mass media communication techniques might be used advantageously in the schools in developing tastes and preferences. "Plugging" of certain types of compositions and repetition of certain compositions, through listening stations, or through the functional use of soft unobtrusive music in the library or study halls, might prove to be an effective means of bringing different types of music to the attention of students. It is accepted that the musical education of the total student body also is the responsibility of the music teacher.

D. Post High School

Adult participation in music appears to be related to some degree to the quality of the musical experiences received in school. This would seem to imply that the ability of the teacher, and the importance he assigns to the aesthetic aspects of music and the satisfaction of students, are more worthwhile educationally and personally to students than the number of concerts, trips, or other activities he sponsors. The teacher must be able to project the various meanings of music to his students; and he must be able to elicit a similar response from them.

III. The Teaching-Learning Process

A. Transmission of the Culture

1. Songs in the contemporary idiom generally are not useful in the elementary school music program. The compositional techniques

employed usually are not appropriate to the abilities and understandings of children in this age group.

2. Group discussion and analysis through reflective thinking appears to be a most effective method of presenting music literature to high school students. This technique would seem appropriate in performance-type classes as well as in literature and appreciation-type classes.

B. Acculturation of the Individual

1. The data on the development of listening skills (aural discrimination) suggest that teachers in the elementary school grades make much use of tone matching activities, both vocally and through the use of the piano keyboard. The space-frame concept, the relating of pitch sound to pitch position in relation to other pitches--aurally, visually, and tactually, appears to be a valid teaching technique.

2. Greater use should probably be made of the tachistoscope or similar devices in the development of music reading skill among elementary school children. This technique appears to be useful in increasing perceptual field, reducing the duration time and number of eye fixations--all behaviors of superior music readers. The use of this technique should supplement the other activities in music related to music reading such as tone matching and the space-frame concept mentioned above. The teacher should not rely on the learning of songs from recordings to develop music reading skills.

3. Emphasis on the solfege method of teaching music reading should be greatly reduced or abandoned altogether. There is no evidence

that this method is successful with a majority of the children. It may, in fact, be a detrimental factor in the development of attitudes toward music by elementary school children.

4. High school choral directors should give greater emphasis to music reading in their rehearsals, and should emphasize in their teaching those reading behaviors (eye movements and perceptions) of superior music readers--shorter fixational durations, fewer fixations, and perception of larger groups of notes.
5. Instrumental music teachers may be hindering their efforts by starting students on instruments at too early an age. The optimum maturational conditions for beginning the study of a musical instrument appear to exist at the seventh or eighth grade level. Other variables to consider in determining optimum age level would appear to be previous musical background and the influence of other interests and activities on perseverance in instrumental study.
6. Intelligence and academic grades, along with some indication of musicality and motivation, are more reliable and valid criteria for predicting success in instrumental music than scores on musicality or musical talent tests.
7. Reliance on achievement in simple melody instrument performance (tonette) as the criterion for determining aptitude for instrumental study or selection of an instrument should be seriously questioned. No evidence exists to warrant this practice. The main value of these instruments is in gaining knowledges of music (notation) and skill in sight reading. If they are used as preband instruments, they should be used to extend the musical back-

ground (or when background is absent, to build musical background) and not for selection purposes or for determining aptitude for instrumental study.

8. The school music program should provide opportunities and instruments for "try-out" purposes to all students possibly interested in learning to play a musical instrument. This seems to be the only valid method of selecting an instrument for study. The "try-out" experience might logically come during the latter half of the sixth grade as part of the elementary school music program.
9. Choral music teachers might consider utilizing class voice techniques in their choral rehearsals or other choral activities. Class lessons in voice at the high school level appear to be as effective, or more effective, than private voice study. This would provide some voice training for those students not able to afford private lessons and also might encourage and motivate some students to study voice privately.
10. Boys with changing voices should be encouraged to sing. Singing during the period of voice change does not appear to hinder the development of the voice, but rather to enhance its development.
11. The scheduling of separate classes for boys during the changing voice period might enhance their musical development and interest in music.

C. Aesthetic Sensitivity

Very little is known about aesthetic sensitivity to music and the factors in its development. It would seem, however, that greater emphasis should be given at all levels of education to the various affective and ideational meanings of music in the

teaching and/or rehearsing process. Analysis through reflective thinking might be an appropriate technique in developing aesthetic sensitivity in music. Some research would suggest this procedure. This area is in need of careful and rigorous research.

D. Undifferentiated Concepts

1. Teachers of general music classes at the junior high school level should give consideration to organizing the content of their instruction into resource units. This organization appears to be an effective method of instruction.

2. The music education profession must come to grips with the problem of defining general music and its role in the music curriculum. The term "general music" has different connotations to different types of music educators. In practice, it often appears to be an activity with no specific goals except to do music in some way with the students.

3. Parents in the school community should be given an opportunity to participate in planning the curriculum or revising the school curriculum in music. Often, the music curriculum provided by the school is not compatible with the objectives of parents, other teachers, administrators, or the profession itself. The performance emphasis generally needs less emphasis, and non-performance activities, designed to create intelligent consumers of music, needs emphasis. This appears to be the feeling of many parents, school officials, and other teachers.

IV. Constraining Elements

A. Administration and Supervision

1. The music education profession and state departments of education

need to identify the common elements which make up a basic music program in the schools. This would give some continuity to the music instruction in most of the schools which would seem to be desirable in our highly mobile society. This is being done to some extent in other areas of instruction. Such action might also lead to greater similarity in music teacher certification requirements. The variance of these requirements (as of 1962) seems to be their outstanding characteristic.

2. It appears obvious that the schools need to offer a greater variety of experiences in music, particularly at the high school level, if they are to meet the variety of student needs in music. This problem is considered to be primarily an administrative problem.

3. Faculty loads of high school music teachers either need to be reduced or the emphasis changed in the music program. (Both actions would seem desirable.) The additional rehearsals and services provided by the music groups and the time required in this work (sometimes after school and evenings) is often not considered in evaluation of music faculty loads.

B. Community Influences

1. Music teachers, particularly at the high school level, may hold misconceptions as to what type of school music program is desired by the parents of a community. Usually, music teachers seem only to be aware of the desires of certain groups in the community. The band parents group might be an example of this. These groups may be exerting a biased influence on the program of music education offered in the schools.

2. It seems desirable for school boards to determine and set policies regarding the activities of the music groups in the school. This technique appears to be an excellent device for protecting the superintendent, principal, and music teachers from undue pressures brought by various community groups.

C. Philosophy

The music education profession, through its professional organizations, needs to clarify the role of music in education so that all persons involved, from the elementary school through the university, will clearly understand their responsibilities to the student. It is obvious from the research reviewed that a common philosophy does not exist, at least in practice. These organizations should also work, it would appear, with accrediting groups, colleges and universities, and state departments of education, to assist in achieving some standards of practice.

D. Teaching Aids

The value of films in music instruction of various types has been reported in several research studies. Values of other teaching aids, such as teaching machines, electronic devices, etc., have not been determined. It would appear, however, that many of these devices may enhance the teaching-learning process, and that teachers should plan for their use whenever practical. Future research, it is hoped, will provide further data on the use and value of these aids in music instruction.

Research

The limited quantity of research topics which were investigated competently in the period 1930-1962 and synthesized in Chapters V through IX leaves a large

number of gaps in the knowledge about music education. These gaps generate a multitude of questions for the careful observer. Too, the research competently done raised questions which can be answered only through broader application and replication. In one sense, there is nothing in music education which is not in need of research or further research. In another sense, there are basic questions in need of definitive and competent investigation which have never been investigated. The following discussion is designed to indicate some of the basic questions in need of study which are interpreted to be primary concerns. For the convenience of the reader, the outline of presentation for these implications for research follow the outline as used in the preceding section.

I. <u>The Teacher</u>

A. Personal Factors

1. The non-verbal abilities of music teachers which do not involve music may be directly related to what is believed to be aesthetic sensitivity. Investigations of these abilities need to be conducted which will establish comparative analyses with persons in other arts, between musicians, and between musicians and persons not related to the arts.
2. The various attitudes of teachers, such as attitudes toward non-musical endeavors in and out of school, professional responsibilities of differing kinds, varieties of students, and other school personnel, need clarification.
3. Not much information is available about the characteristics (age, sex, marital status, etc.) of music teachers. Correlational analyses using these data are needed for more realistic appraisals of successful music education endeavors, recruitment of teachers,

and projections of the music teacher population.

4. Comparative studies of the nature of intelligence in the music teacher are needed in order to select realistically the potentially successful person in academic work and in professional work.
5. The interests of teachers as influential elements in their teaching and as distinguishing factors in their total professional life need to be compared with the interests of their peers as a means for understanding the music teacher's role in the school and its effect on the status of music in the school.
6. The question of the music teacher's musicality compared with that of other musicians needs replication using a substantial sample.
7. Further analyses of the music teacher personality should be conducted using a wide variety of instruments and a large population so that limits and tolerances can be established for the purpose of guidance, selection, and retention at the undergraduate level.
8. Perhaps the greatest deficiency in research information is the value system of music educators. School music endeavors of different kinds have different values placed on them. The relationship of the teacher's values, the community's values, and the practices in the schools need a rigorous objective examination which will include demographic differences.

B. Social Factors

1. A complete analysis of the socio-economic background of the student entering the music teacher education curriculum and its relationship to his success in the curriculum is needed.
2. Role studies of the music teacher would clarify the issues and, perhaps, content of the teacher education curriculum. Of particular importance is the perceived role of the teacher in terms of

his own estimate, the estimate of his peers, the estimate of his superiors, and the estimate of the community.

3. The function of the music teacher's professional organizations and his relationships to them are not known except informally.
4. The non-professional life of the music teacher may be related to his quality in the classroom. His social activities and concerns have not been investigated.
5. The family relationships and family dynamics of the music teacher have been touched upon, but no examination of depth has been made.
6. The actual community prestige of the music teacher in comparison to other occupations and other musicians would provide not only an index of a morale factor among music teachers, but also an indication of the prestige of music education itself.

C. Education

1. The process of admission and retention in the music teacher education curriculum has had little valid analysis. Follow-up studies of subjects used in the construction and use of prognostic measures should be conducted. The persistence or drop-out of such subjects may be an indicator of characteristics in persons who should be encouraged or discouraged in their desire to be music teachers. Various relationships have been examined and need further examination--relationships such as musicality, personality, and values as they apply to the teacher education process.
2. The entire curricular structure of teacher education is a dubious organization of knowledge, skills, and activities. It is dubious because the relationship between this organization and that which prevails in the schools do not seem to coincide. The validity of the objectives in the curriculum as the curriculum exists now is

not clearly demonstrated. In fact, a great area of non-musical knowledges and skills needs specification and minute examination.

3. The knowledges which are needed by a student in the process of teacher education or at the end of it are not standardized or even agreed upon. The knowledges believed to be necessary to the student are inbred into the academic system and inferred from the feedbacks from the teaching profession and from certification requirements. Whether or not the knowledges presently required and acquired are professionally appropriate has yet to be validated. The kind and balance of curriculum is still a difficulty for which no adequate solution has been found. Specifically, there is substantial evidence which reveals a need for more teacher knowledge in the non-music areas such as psychology, social psychology, and sociology. Too, there is no indication of what kinds of theoretical and historical knowledges in music are actually needed at the various levels of education. Studies in these areas are long overdue and are prerequisites to intelligent revisions in the curricular structure of teacher education.

4. The various musical skills needed by the elementary school classroom teacher have not been completely validated in the actual teaching process. Subjective estimates and calculated guesses based on subjective observations have been made for the construction of syllabi in teacher education. Three types of skills most frequently used are singing, reading, and playing the piano. Levels of proficiency must be determined in terms of the requirements found in the materials used.

The music teacher or specialist has certain requirements to

meet but these too have never been identified in behavioral terms except to some extent in woodwind instruments. The validity of the NASM standards for performance skills has never been examined in terms of the behaviors needed by the teacher in the actual teaching situation.

The relationship between the teacher's aural, visual, and psychomotor abilities and his musical skills has not been demonstrated to such an extent that prerequisites to the learning of performance skills can be established.

5. Innumerable problems concerning the expectant teaching abilities of the undergraduate student have not been investigated. These include such elements as the use of the piano, lesson planning, conducting as a teaching device, teaching at more than one level, the role of the student teacher in the school as it relates to performing groups and general music, and the types of knowledges applicable to the teaching situation.

Another set of variables in the development of the student's teaching ability is that related to other persons involved, namely the cooperating teacher and the supervising teacher. The validity of the observations of these two persons has not been examined. A major difficulty for the student is his interpersonal relationships with the cooperating teacher and the supervising teacher. Because of the highly subjective nature of musical art, the types of interpersonal relations may be more complex than in other areas of teaching.

D. Professional Competencies

1. The studies which have been conducted on the competencies of the music teacher have surveyed opinions for the most part. Behavioral

analyses are needed in almost all areas of teacher activity in the classroom at all levels from kindergarten through twelfth grade.

2. The relationship of teacher competencies to specific curricular demands at various levels of education are needed. There is confusion between what is desirable, what is needed, and what is used.
3. The relationship between teacher competencies and administrative constraints as well as physical constraints in terms of pupil learnings have yet to be examined.
4. There are differences between the kinds of knowledge and the relationships of those kinds of knowledge to the learning process. Too, there are differences between skills and knowledge. The relationships and balance of these to various grade levels are yet to be determined.
5. It is evident that music education apparently suffers from philosophical confusion. Further analysis in this area is a prerequisite to determining the nature of the deficiencies in music education.

II. <u>The Student</u>

A. Personal Factors

1. Research attention needs to be given to the apparent decline of interest in school music by children with increasing age. Questions such as the following would seem appropriate: What are the factors which seem to account for the decline of interest in music? Do relationships appear to exist between the level of interest and certain aspects of the school music program? Is the decline a gradual phenomenon, or do periods of rapid decline in interest occur? At what age levels and in relationship to what

variables does the decline occur? Do the attitudes and interests of students toward other school subjects appear to decline to the same extent as they appear to do in music? A psychological and sociological approach to these problems would appear to be desirable.

2. The role of out-of-school music experiences in the development of positive attitudes towards music needs further study. Information is needed to identify the factors or variables influencing or shaping attitudes and how these factors are different, or operate differently, in the school setting.
3. The interest level of high school students in listening activities in music needs further investigation. If this interest in music listening truly exists, what factors then account for the seemingly small enrollments in such activities when offered in the school curriculum? Are organizational problems (scheduling) responsible? Are the activities and/or techniques utilized in such classes inappropriate in regard to student interests?
4. The value of music instruction in the school program as viewed by students (not only music students) needs further investigation in depth. Are the values expressed by a large majority of students more in keeping with those seeming held by most parents, or more in keeping with those of the current school music program?
5. Elements involved in the aural perceptions of students would appear to be of great value to the music teaching profession. Information relating to the factors operating in the general acceptance of popular-commercial music would be most revealing. What psychological processes are seemingly involved (attention, effects of rhythm, repetition, etc.)? What sociological processes are in

operation (group acceptance, status, ego gratification, etc.)? How could music teachers make use of these knowledges in enhancing their instruction and influencing the musical taste of students?

6. Comparative studies of the emotional traits of high school musicians and those of music teachers and professional musicians might reveal data which would be useful in predicting success in music study. Do similar emotional traits exist within these three groups of persons? To what extent are these traits different from those of the non-musician? Are they typical of any other groups of persons, artists for example?
7. The possible relationship of emotional traits and preferences for certain types of music needs study in depth. Do the musical preferences of adolescents seem to be related to certain emotional traits? Are similar relationships evident with younger and/or older students?
8. Studies on the possible influence of music activities and music teaching procedures on the development of various types of interests are needed. No studies on this topic were found in the literature reviewed. The lack of sustained interest seemingly due to instructional procedures appears to be a major factor in the withdrawal of academically talented students from school music activities. Would this also be true for less talented students? What specific behaviors of teachers can be identified which affect the interest level of students in music? How does teacher personality relate to this problem?
9. The pitch and rhythmic discrimination abilities of children of different age levels needs re-study in light of the increase in the amount of music and sound in the environment today. Children

cannot escape the conditioning effects of the sound and music which saturate the environment via mass means of communication. Have the aural discriminatory abilities of children changed because of the abundance of music and sound in the environment? All aspects of aural perception need re-study due to the possible conditioning effects of the greater amount of music available today as compared to that available when such studies were conducted in earlier years. All of the early classic studies on musical perception reported in psychology of music books need replication.

10. Psychological, sociological, and anthropological studies on the development of aesthetic sensitivity would give much needed data in coming to clearer understanding of the meaning and the value of music to man. Studies of these types possibly would provide a basic rationale for the role of music in life and education. Biological studies would also seem of import here.

11. The creative abilities in music and the factors influencing or restricting music creativity in school children have not been studied. Various approaches to teaching music which have been termed "creative" are found in the professional literature. These "approaches" however, have never been evaluated. Questions such as the following would seem to be pertinent here: How can musical creativity be identified at various age levels? What factors or elements in music instruction seem to enhance or restrict the expression and development of creativity? What musical behaviors differentiate the creative student in music from the less creative student?

B. Social Factors

1. The effects of sensory deprivation (culturally disadvantaged child) on the development of musical perception, musical ability, interest, and motivation, need immediate and serious study. Some evidence exists in other areas of study which indicates that lack of adequate and varied sensory experience seems to restrict perceptual development and, hence, learning. Study of the effects of sensory deprivation on aesthetic sensitivity also would be most appropriate and timely. Socio-economic factors might, today, play a more important role in the development of musical abilities than was assigned this factor in earlier studies.

2. The influence of the home musical environment on the development of musical perceptions, abilities, interests, and attitudes needs to be determined in greater depth. It would appear that such data could only be obtained through longitudional studies. Of interest here would be the effects of a structured home musical environment on the above identified variables. What effect, for instance, would the use of recorded music in the home nursery have on these abilities? Some evidence exists that infants are most susceptible to sound. Recordings of the mother's heartbeat have been shown to calm distraught infants. The possibilities for research in this area seem almost endless.

C. Education

1. Further study of the reasons for withdrawal of students from music activities in the secondary school might provide data which would effect changes in the music curriculum and the practices in music education. Some evidence exists which suggests that some high school students do not wish to spend evening hours in school music

activities. Other evidence suggests that a large portion of the students would rather participate in music listening activities rather than performance activities. The identification of the valid reasons for students withdrawing from music activities would provide some criteria for the evaluation of existing activities in the music education program.

2. The identification and analysis of reasons for student participation in school music activities would also provide some indication of student values and also some measure of the effectiveness of the music program. Do students participate primarily because of musical values, or primarily because of non-musical values? The relationships which exist between expressed reasons (values) and the type of music program would indicate, to some extent, the influence of various types of programs.

D. Post High School

1. Studies on the music reading (vocal) ability of adults could give some indication of the need of this ability, its use, and value in adult life, and most importantly, the effectiveness of the school music program in developing this ability. No studies on this topic were found in the literature. Research on various aspects of this topic might reveal data which might alter existing concepts pertaining to objectives and the functional uses of music in everyday living.

2. The number of college students participating in musical activities and enrolling in music courses in terms of their public school experience in music might provide a type of evaluation of the school music program. Many college campuses contain a large number of students who participated in music activities in the public schools

but who do not continue music study in college. What reasons seem to account for this change in behavior? How are such reasons related to those given for participation in high school music activities? Are the reasons for lack of music registrations at the college level primarily due to program requirements and scheduling problems as indicated by some music teachers, or are they due to a "burning-out" of student interest and motivation as indicated by other music educators?

III. The Teaching-Learning Process

A. Transmission of the Culture

1. Very little information is available on effective methods of presenting music literature to junior and senior high school students. The data available suggest that the discussion method, probably at the reflective level, is a more effective means of presentation than sheer listening alone. This mode of presentation is recommended for classes in music appreciation and music literature. No research has been conducted on this problem in junior and senior high school performance activities or in the elementary school classroom music program. Studies are needed on the types of music literature seemingly most meaningful and appropriate to the various age and background levels of students, and the types of listening skills utilized by students. The relationships of these variables to the objectives of various music listening activities also must be determined.

2. Investigation of the use and value of programmed listening and instruction also is needed. Models for teaching music appreciation should be tested in the school situation.

3. The interests and perceptual levels of high school students in listening skills need further investigation. What elements in music appear to be most appealing to such students? What types of listeners are high school students--mood, ideational, cognitive? How does the type of listener relate to the age, sex, musical background, and social environment? What role does socialization play in the interest shown by high school students in listening to musical recordings?

B. Acculturation of the Individual

1. The role and value of classroom instruments (melody bells, autoharp, etc.) on the development of aural discrimination and music reading skills is yet to be determined. Additional experimentation on the space-frame concept in teaching music reading at the junior and senior high school level as well as the elementary school level would be valuable. The value of programmed listening and instruction in developing these abilities should be investigated. The musical perceptions of children, in terms of their age levels and sub-cultures, needs detailed study.
2. The value of tachistoscopic techniques for improving music reading skills with junior and senior high school students in choral music classes should be determined. Also, perceptual training of other types, which utilize behaviors of superior sight-readers as samples, might produce useful results.
3. Additional studies on the optimum maturational level for children to begin study of a musical instrument, with consideration given to the influence of musical background and psychological and sociological variables affecting children at various age levels, are needed. What age level appears optimum in terms of various

types of background in music? What age levels appear optimum for beginning instrumental music study in terms of the press of social activities, other school activities, and parental desires? These are some of the questions which might be appropriate for research study.

4. Detailed study is needed on the effects of overlearning and reminiscence in delayed performance, and on the effect of negative practice. What are the effects of silent drill or study on overlearning beyond the criterion of initial mastery? Is overlearning more beneficial as an aid in retention of one type of music as opposed to other types? Is efficient memorization of music for instrumental performance a matter of experience, cognitive abilities, or physical coordination? What are the effects of review in the process of overlearning?

5. Models of instruction for beginning instrumental music classes, which take into consideration musical background, psychological, and sociological factors, need to be developed and tested in the school environment.

6. Experimentation on segregated music classes for boys during the period of voice change should be conducted for purposes of determining the variables operating in a class of this type as opposed to those operating in mixed classes. Psychological and sociological variables would seem to be of import in studies of this kind. (See the previous and following sections for additional implications for research relating to the acculturation of the individual in the teaching-learning process.)

C. Aesthetic Sensitivity

The analysis of various teacher behaviors in terms of student

responses relative to aesthetic sensitivity has never been studied. What behavioral techniques, what environmental factors in the school and community, and what intellectual experiences enhance the development of aesthetic sensitivity at all levels of education. Models of instruction would seem to be an appropriate method of gaining data on these variables. The vagueness of the concept "aesthetic sensitivity" is in need of philosophical research and probably biological research. The objectives of instruction in terms of aesthetic sensitivity need investigation and definition. The characteristics of the aesthetic sensitivity of students to music needs to be determined. Relationships of such sensitivities to popular-commerical types of music also would seem to be an appropriate area of investigation.

D. Undifferentiated Concepts

Research is definitely needed on the role and function of the general music class in the program of music education from kindergarten through the twelfth grade in high school. The meaning of the concept "general music" has never been examined fully. What are the objectives of this type of class? What types of activities are most suitable for reaching these objectives? What teacher behaviors are most effective? What organization procedures (content and class-wise) are effective? How do students of various background and skills react to certain experiences in these classes? Model building and testing, and experimental methods of research would seem to be most appropriate in the study of these problems. The opportunities and needs for research in this area appear to be endless.

IV. Constraining Elements

A. Administration and Supervision

1. Comparisons are needed between different administrative organizations and practices such that some kind of evaluative criteria or guidelines can be developed. In this connection, it would be useful to have an analysis of the various types of supervisory relationships which exist between state-level staff and local staff. The legal as well as the extra-legal obligations of state-level personnel are an area which has had no examination.

2. The effect of school administration on the teaching-learning process and pupil achievement in music has had some examination. There is a need for the replication of these studies with more severe controls and a greater variety of achievement measures. The effects of administrative practices, such as budgetary and physical space allocations, faculty assignments, scheduling of music classes, and supervisory procedures, are relatively unknown. Specific relationships such as the following remain major questions: criteria for teaching loads at various levels derived from teacher behaviors and teacher achievement in various responsibilities; budgetary practices in relation to teaching success, pupil achievement, and educational objectives; the costs of music instruction compared with other subjects; the relationships between pupil achievement and scheduling; comparative analysis of local school system music supervision in differing school systems in terms of teacher achievement and growth as well as pupil achievement; analysis of supervisory competencies in behavioral terms.

B. Community Influence

The relationship of the community to school music remains a major question. There is evidence that secondary school music is directly influenced by parental groups and the inference is that this influence is negative to some degree. The elementary school music program appears to be little influenced by the community. The relatively exact nature of the influences which exist and the actual cultural orientation of school music at all levels has not been examined. The perceptions of the role of music in the schools by different segments of society and in differing geographical locations are unknown. Too, the perceptions of the role of music in the school held by various personnel within the school remain a behavioral and philosophical question. In addition to these perceptions, there is also the question of the function or service local professional musicians can be expected to fulfill. Comparative analyses of community social factors are needed on such variables as race, religion, and social status in terms of school music.

C. Contests and Festivals

The value of contests and festivals as one of the major endeavors of secondary school music and is a frequent source of debate among school musicians. There has been no controlled study of the contests and festivals. Four basic areas are in need of a variety of research investigations: analysis of the effectiveness of contests and festivals in terms of pupil behavior and teacher behavior; analyses of pupil and teacher motivations for participation in contests and festivals; the relationship of the quality of school music to contest participation; and the re-

lationship of contest participation to the type of total music curriculum in a school.

D. Philosophy

There are numerous inconsistencies in the information available about the philosophy of music education held by persons having different roles in education as a whole. The very need for a philosophy as a determinant of the quality of music education is an uninvestigated variable. The effect of a philosophy of music education or the lack of it on the methodology within music education both in long range and short range terms has not been investigated. The objectives for school music which are expressed in the professional literature have yet to be validated in objective terms. The behavioral implications of the varieties of philosophies and concomitant attitudes toward music education are also in need of analysis--particularly comparative analyses including teachers, parents, and administrative personnel. Perhaps most important is the need for a philosophy of music education constructed within the rational tradition but based on the knowledges available from the social and biological sciences.

E. Teaching Aids

The few studies which have been made on teaching aids have been limited previously to surveys of what is used. Pupil achievement through the use of differing media needs investigation. The experiments that have been conducted have compared a medium with traditional methods. Some aspects of teaching aids such as room sizes, room equipment arrangements, stage equipment and the acoustical properties of rooms have not been examined in terms of their actual effect on the teaching-learning process. A major assump-

tion underlying such activities as programmed instruction is that a student has been motivated to continue to learn or, in other words, has developed a love of learning. The effect of a medium's sound quality (on a student's interests and motivation) is a fundamental problem. Because much of school music at the elementary level is rote learning and because the early impressions in new experiences are so important, the effect of varying qualities of sound systems on the singing and aesthetic values of children is a fundamental problem.

BIBLIOGRAPHY

A. General References

B. Research Studies Abstracted: 1930-1962

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BIBLIOGRAPHY

General References

Beattie, John W. "Function of Research." Music Educators National Conference Yearbook, 1934. pp. 89-92.

Best, John W. Research in Education. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961.

Britton, Allen P. (Ed.). Journal of Research in Music Education. Washington, D.C.: Music Educators National Conference, 1953-1965 (Quarterly).

Brodbeck, May. "Logic and Scientific Method in Research on Teaching." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand-McNally Co., 1963. pp. 44-93.

Burckel, Christian E. (Ed.). College Blue Book. Yonkers-on Hudson, New York: Universal Lithographers, 1960.

Byrens, F. C. "Recent Experiments in Music Appreciation." Music Educators National Conference Yearbook, 1935. Chicago: Music Educators Nat. Conf., 1936. pp. 198-204.

Campbell, Donald T. and Julian C. Stanley. "Experimental and Quasi-Experimental Design for Research on Teaching." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand-McNally Co., 1963. pp. 171-246.

Cartter, Allan M. (Ed.). American Universities and Colleges, (8th Ed.). Washington, D.C.: American Council on Education, 1962.

Culbertson, Jack A. and Stephen P. Hencley. Educational Research: New Perspectives. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1963.

Dissertation Abstracts. Ann Arbor, Michigan: University Microfilms, Inc.

Dykema, Peter W. "A Review of Achievements and an Outline of Studies Still to be Made." Journal of Proceedings of the Music Supervisors National Conference, 1928. pp. 281-284.

Earhart, Will. "Coordination of Research in Music Education." Music Educators National Conference Yearbook, 1936, p. 283.

Edwards, Allen L. Techniques of Attitude Scale Construction. New York: Appleton-Century-Crofts, Inc., 1957.

_____. Experimental Design in Psychological Research. (Revised Ed.) New York: Rinehart and Co., Inc., 1960.

Ferguson, George A. Personality Measurement. New York: McGraw-Hill Book Co., 1952.

_____. Statistical Analysis in Psychology and Education. New York: McGraw-Hill Book Co., 1959.

Gage, N. L. "Preface." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand McNally Co., 1963, pp. iv-vi.

Gordon, Roderick D. "Doctoral Dissertations in Music and Music Education, 1957-1963." In Allen P. Britton (Ed.), Journal of Research in Music Education, 13:1 (Spring, 1965), pp. 45-55.

Guba, Egon G. "Experiments, Studies, Surveys, and Investigations." In Jack A. Culbertson and Stephen P. Hencley (Eds.), Educational Research: New Perspectives. Danville, Ill.: The Interstate Printers and Publishers, Inc., 1963. pp. 237-248.

Hillway, Tyrus. Introduction To Research. Boston: Houghton Mifflin Co., 1956.

Kittle, J. Leslie. "Music Education and Scientific Research." Music Supervisors Journal, 18 (May, 1932), p. 37.

Kwalwasser, Jacob, Peter W. Dykema, and Will Earhart. "Research in High School Music." In "The Development of High School Curriculum," Sixth Yearbook of the Department of Superintendence, Washington, D.C.: National Education Association, 1928, p. 254.

Kwalwasser, Jacob. "Curriculum Investigations at the Elementary and Secondary School Levels: Music." Review of Educational Research, 4 (1934), pp. 175-8.

Larson, William S. (Ed.). Bibliography of Research Studies in Music Education, 1932-1948. Washington, D.C.: Music Educators National Conference, 1949.

_____. Bibliography of Research Studies in Music Education, 1949-1956. Washington, D.C.: Music Educators National Conference, 1957.

List of Members. Galesburg, Illinois: National Association of Schools of Music, 1962.

MacLatchy, J. H. "Review of Research in Music Education." Review of Educational Research, 1 (1931), p. 31.

Monroe, Walter S. and Max D. Englehart. The Scientific Study of Educational Problems. New York: The MacMillan Co., 1936.

More, Grace V. D. "Music." Review of Educational Research, 2 (1932), p. 66.

Mourant, John A. Formal Logic: An Introductory Textbook. New York: The MacMillan Co., 1963.

Petzold, Robert G. "Directions for Research in Music Education." Council of Research in Music Education. Urbana, Illinois: College of Education, The University of Illinois, 1963, p. 19.

Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Co., Inc., 1956.

Small, Arnold M. (Ed.). Bibliography of Research Studies in Music Education, 1932-1944. Chicago, Illinois: Music Educators National Conference, 1944.

Tatsuoka, Maurice M. and David V. Tiedeman. "Statistics as an Aspect of Scientific Method in Research on Teaching." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand McNally Co., 1963, pp. 142-170.

Travers, Robert M. W. An Introduction to Educational Research. New York: The MacMillan Co., 1961.

Upton, Albert. Design for Thinking. Stanford, California: Stanford University Press, 1961.

U.S. Department of Health, Education and Welfare. Education Directory, 1962-1963, Part 3: Higher Education. Washington, D.C.: U.S. Government Printing Office, 1963.

U. S. Department of Health, Education and Welfare. Enrollment for Advanced Degrees, First Term 1961-1962: Final Report. U. S. Government Printing Office, 1963.

U. S. Department of Health, Education and Welfare. Earned Degrees Conferred: Bachelor and Higher Degrees, 1961-1962. U. S. Government Printing Office, 1963.

Van Dalen, Deobold B. Understanding Educational Research. New York: McGraw-Hill Book Co., Inc., 1962.

Whitley, Mary T. "Music." Review of Educational Research, 4 (1934), pp. 501-2.

B. Competent Research Abstracted: 1930-1962

Amar, Wesley F. "An Investigation of Some Factors Relating to the Identification of Eighth Grade Children Possessing Musical Potential." Unpublished Doctoral Dissertation, Loyola University, 1958. 158 pp. (Ed.D.).

Andrews, Dorothy E. "Comparative Study of Two Methods of Developing Music Listening Ability in Elementary School Children." J. Res. Music Educ., 10:1 (Spring, 1962), 59-64.

Annett, Thomas. "State and County Supervision of Public School Music." Unpublished Doctoral Dissertation, University of Cincinnati, 1938. 185 pp. (Ed.D.).

Ardrey, Eldon A. "The In-Service Needs of Arizona Primary Classroom Teachers to Teach Music." Unpublished Doctoral Dissertation, University of Colorado, 1959. 312 pp. (Ed.D.). (Univ. Micro. No. 60-1031).

Arnspiger, Varney C. Measuring the Effectiveness of Sound Pictures as Teaching Aids. (Teach. Coll. Contr. Educ., No. 565.) New York: Columbia University, Bureau of Publications, 1933. 163 pp. (Ph.D.).

Ball, Louis O., Jr. "A Study of the Effectiveness of Three Methods of Teaching Choral Music as Evaluated Through Musical Performance." Unpublished Master's Thesis, University of Tennessee, 1953. 164 pp. (M.S.).

Banse, Andrew M. "Music Supervision in the Elementary Schools of New York State." Unpublished Doctoral Dissertation, New York University, 1951, 166 pp. (Ed.D.). (Univ. Micro. No. 3440).

Barr, Frank W. "Current Practices in Music Education in the Elementary Schools of Northeastern Ohio." Unpublished Doctoral Dissertation, Western Reserve University, 1956. 351 pp. (Ph.D.).

Barth, George W. "Some Personality and Temperament Characteristics of Selected School Music Teachers." Unpublished Doctoral Dissertation, University of Southern California, 1961. 304 pp. (Ed.D.). (Univ. Micro. No. 61-2521).

Batcheller, John M. "An Appraisal of Music Education in the White Elementary Schools in South Carolina." Unpublished Doctoral Dissertation, University of South Carolina, 1956. 185 pp. (Ph.D.). (Univ. Micro. No. 56-3948).

Baumann, Victor H. "Socio-economic Status and the Music Preferences of Teen-Agers." Unpublished Doctoral Dissertation, University of Southern California, 1958. 291 pp. (Ed.D.). (U.S.C. Micro. No. 737-B).

Becker, William R. "The Effects of Overlearning, Initial Learning Ability and Review Upon the Music Memory of Junior High School Cornet and Trumpet Players." Unpublished Doctoral Dissertation, State University of Iowa, 1962. 93 pp. (Ph.D.). (Univ. Micro. No. 62-4963).

Best, Clarence J. "Vocal and Instrumental Music Rooms and Equipment in Secondary Schools." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1945. 380 pp. (Ph.D.).

Bliss, Raymond B. "A Survey of the Courses of Study for Music in Three-year City Senior High Schools of Ohio." Unpublished Master's Thesis, University of Texas, 1960. 74 pp. (M.M.).

Blyler, Dorothea M. "The Song Choices of Children in the Elementary School." Unpublished Doctoral Dissertation, University of Illinois, 1957. 359 pp. (Ed.D.). (Univ. Micro. No. 58-4368).

Bodie, Merry D. "A Study of Seventh Grade General Music Listening Experiences." Unpublished Master's Thesis, The University of Texas, 1958. 70 pp. (M.M.).

Borg, Robert L. "An Analysis of Music Teacher Educational Programs in a Select Group of Mid-Western Universities and Colleges." Unpublished Doctoral Dissertation, State University of Iowa, 1959. 180 pp. (Ph.D.). (Univ. Micro. No. 59-5701).

Boyle, John D. "A Study of Current Practices in General Music in the Senior High Schools of Kansas, Missouri, Nebraska, and Oklahoma." Unpublished Master's Thesis, University of Kansas, 1960. 81 pp. (M.M.E.).

Briggs, Robert L. "The Development and Standardization of an Achievement Test for Use in Music Education at the Graduate Level." Unpublished Doctoral Dissertation, University of Kansas, 1951. 202 pp. (Ph.D.).

Broquist, Oliver H. "A Survey of the Attitudes of 2594 Wisconsin Elementary School Pupils Toward Their Learning Experiences in Music." Unpublished Doctoral Dissertation, University of Wisconsin, 1961. 304 pp. (Ph.D.). (Univ. Micro. No. 61-5897).

Brown, Robert D. "A Study Concerning the Major Weaknesses of Music Teachers in the Secondary Schools of Kansas." Unpublished Master's Thesis, University of Kansas, 1955. 43 pp. (M.M.E.).

Buebendorf, Francis X., Jr. "A Study and Special Treatment of Classic Symphonies for the School Orchestra." Unpublished Project Report, Teachers College, Columbia University, 1947. 207 pp. (Ed.D.).

Buegel, Herman F., and Patricia S. Billing. Inventoried Interests of Participants in Music Groups." J. Educ. Res., 46:1 (October, 1952), pp. 141-146.

Bulgin, Lansing W. "Music Education Curricula in Selected Non-Accredited Liberal Arts Colleges." Unpublished Doctoral Dissertation, Indiana University, 1957. 274 pp. (Ph.D.). (Univ. Micro. No. 57-4830).

Burkhalter, N. Laurence. "Establishing Criteria for the Evaluation of the Applied Major Area of Instruction for the Bachelor's Degree in Music Education." Unpublished Doctoral Dissertation, The Ohio State University, 1961. 235 pp. (Ph.D.). (Univ. Micro. No. 62-749).

Burmeister, Clifton A. "A Study of Community Attitudes Toward Music Education in the Public Schools of Selected Communities in Missouri." Unpublished Doctoral Dissertation, University of Kansas, 1953. 217 pp. (Ph.D.).

Burns, Samuel T. Harmonic Skills Used by Selected High School Choral Leaders, ("Teach. Coll. Contr. Educ., No. 905.") New York: Columbia University, Bureau of Publications, 1945. 121 pp. (Ph.D.).

Busse, Bernard W. "An Experiment in the Use of Recordings in the Teaching of Elementary Grade Vocal Music." Unpublished Doctoral Dissertation, Northwestern University, 1952. 336 pp. (Ph.D.).

Calder, Robert W. "Factors Influencing Male Music Education Graduates of Certain Pennsylvania Institutions of Higher Education to Leave or Not Enter the Profession." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1962. 181 pp. (Ed.D.). (Univ. Micro. No. 63-3992).

Campbell, Wilbur P. "A Study of District and All-State Music Festivals in Pennsylvania with Implications for the Pennsylvania Music Educators Association." Unpublished Doctoral Dissertation, Pennsylvania State University, 1955, 238 pp. (Ed.D.).

Carney, Gerald M. "The Music Program in High Schools Having an Enrollment of Less Than 150 Students." Univ. Kansas Bull. Educ., 13:3 (1959), 103-107.

Cassie, Lillian J. "An Evaluation of Opportunities in Music Education in the Preparation of Elementary School Vocal Music Teachers at Wayne State University." Unpublished Doctoral Dissertation, Wayne State University, 1959. 294 pp. (Ed.D.). (Univ. Micro. No. 59-4699).

Chin, Shuyung. Relationship Between Certain High School Subjects and the Out-of-School Activities of the Students. New York: Columbia University, 1934. 109 pp. (Ph.D.).

Christy, Leo J. "A Study of the Relationships Between Musicality, Intelligence and Achievement." Unpublished Doctoral Dissertation, Indiana University, 1956, 165 pp. (Ph.D.). (Univ. Micro. No. 57-592).

Cockrum, James E. "A Comparative Study of Selected Educational Music Film Evaluations as Prepared by Selected Groups." Unpublished Doctoral Dissertation, Indiana University, 1955. 263 pp. (Ed.D.). (Univ. Micro. No. 55-977).

Coe, Robert M. "A Comparative Analysis of the Music Programs of Selected Teachers Colleges, Liberal Arts Colleges, and State Universities and the Rating of These Programs by Public School Music Teachers." Unpublished Doctoral Dissertation, University of Colorado State, 1961. 175pp. (Ed.D.). (Univ. Micro. No. 61-6887).

Colbert, John K. "The Teaching Load and Related Activities of Music Teachers in Indiana Public Schools, 1953-54." Unpublished Project Report, Teachers College, Columbia University, 1956. 140 pp. (Ed.D.).

Collins, Thomas C. Music Curriculum Trends in Higher Education. Atlanta: Southern Regional Education Board, 1960. 137 pp.

Colwell, Richard J. "An Investigation of Achievement in Music in the Public Schools of Sioux Falls, South Dakota." Unpublished Doctoral Dissertation, University of Illinois, 1961. 311 pp. (Ed.D.). (Univ. Micro. No. 61-4278).

Conrick, John E. "The Relation of Certain Measures - Musicality, Personality, Social Preference, and Intelligence - to the Music Teaching Success of the Elementary Classroom Teacher." Unpublished Master's Thesis, University of Kansas, 1948. 77 pp. (M.M.E.).

Corson, Donald. "The Administration of Instrumental Music in Selected Secondary Schools in New Jersey." Unpublished Doctoral Dissertation, University of Pennsylvania, 1948. 139 pp. (Ed.D.).

Cory, Philip B. "A Survey of High School Competitive Music Festivals." Unpublished Master's Thesis, University of North Dakota, 1951. 94 pp. (M.S.).

Cowan, Thomas W. "The Pre-College Musical Training and Experience of Music Education Seniors." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1952. 156 pp. (Ed.D.).

Cramer, William F. "The Relation of Maturation and Other Factors to Achievement in Beginning Instrumental Performance at the Fourth through Eighth Grade Levels." Unpublished Doctoral Dissertation, The Florida State University, 1958, 88 pp. (Ed.D.). (Univ. Micro. 58-2786).

Creitz, Dale P. "A Study of the Use of the Piano as a Space Frame in Teaching Vocal Music to Children." Unpublished Master's Thesis, The University of Kansas, 1943, 74 pp. (M.A.).

Cucci, Angelo M. "A Study of Practices and Characteristics in Secondary School Music Education Programs Related to Participation of Students in Musical Activities." Unpublished Doctoral Dissertation, University of Illinois, 1955, 166 pp. (Ed.D.). (Univ. Micro. No. 15-195).

Culpepper, Leon R. "A Study of the Hearing Impairments in Defective Singers." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1961. 146 pp. (Ed.D.). (Univ. Micro. No. 61-5802).

Dahlin, Walter O. "The Relationship between the Conducting Needs of School Music Teachers and Present Practices in the Teaching of Conducting." Unpublished Project Report, Teachers College, Columbia University, 1951. 164 pp. (Ed.D.).

Dalby, J. Philip. "A Study of Musical Activities, Instrumentation, and Technical Competence as Factors in Arranging Music for High School Bands." Unpublished Doctoral Dissertation, University of Oregon, 1958. 148 pp. (Ed.D.). (Univ. Micro. No. 58-359).

Daniels, Ethel H. "An Investigation on the Effects of Exposure to Contemporary Music on the Interests and Attitudes of Ninth Grade Students." Unpublished Master's Thesis, Texas Southern University, 1961. 58 pp. (M.M.E.).

Daniels, Neil M. "The Relation of Certain Personality Traits to Musical Likes and Dislikes." Unpublished Master's Thesis, Stanford University, 1934. 78 pp. (M.A.).

Davis, Donald E. "A Survey of Public School Vocal Music in Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1954. 192 pp. (Ed.D.).

Dean, Charles D. "Seashore Tests of Musical Talent in Teacher Education." Unpubli- Field Study Report, No. 1. Colorado State College of Education, 1936, (Ph.D.).

DeVermond, Mary V. F. "Relationships of Piano Training to Ability of 205 Elementary Teachers in Carrying on Classroom Music Activities in Maryland." Unpublished Doctoral Dissertation, University of Maryland, 1959. 251 pp. (Ed.D.). (Univ. Micro. No. 60-1279).

Drake, Gordon V. "An Evaluation of the Formal Preparation of Secondary School General Music Teachers." Unpublished Doctoral Dissertation, Denver University, 1957. 221 pp. (Ed.D.).

Dryden, Harry R. "A Survey of the Supervisory Practices in the Field of Music in the Public Elementary Schools of Pennsylvania." Unpublished Doctoral Dissertation, University of Pittsburgh, 1954. 255 pp. (Ph.D.). (Univ. Micro. No. A54-1228).

Duda, Walter B. "The Prediction of Three Major Dimensions of Teacher Behavior for Student Teachers in Music Education." Unpublished Doctoral Dissertation, University of Illinois, 1961. 201 pp. (Ed.D.). (Univ. Micro. No. 61-4285).

Ehlert, Jackson K. "The Selection and Education of Public School Music Teachers." Unpublished Doctoral Dissertation, The University of Colorado, 1949, 467 pp. (Ed.D.).

Ekstrom, Robert C. "Comparison of the Male Voice Before, During, and After Mutation." Unpublished Doctoral Dissertation, University of Southern California, 1959. 275 pp. (Ed.D.). (Univ. Micro. No. 59-6120).

Erneston, Nicholas. "A Study to Determine the Effect of Musical Experience and Mental Ability on the Formulation of Musical Taste." Unpublished Doctoral Dissertation, Florida State University, 1961. 176 pp. (Ph.D.). (Univ. Micro. No. 61-5637).

Ernst, Karl D. "A Study of Certain Practices in Music Education in School Systems of Cities over 150,000 Population." Unpublished Doctoral Dissertation, University of Oregon, 1955. 222 pp. (Ed.D.).

Evans, Carl H. "A Study of Factors Affecting the Attitude of the Elementary Classroom Teacher Toward Teaching Music." Unpublished Doctoral Dissertation, Northwestern University, 1958. 288 pp. (Ph.D.). (Univ. Micro. No. 58-5750).

Falkner, Kenneth W. "The Influence of Music Education and Private Study on Adult Interest in Music in Two Selected Communities." Unpublished Doctoral Dissertation, State University of Iowa, 1957. 130 pp. (Ph.D.). (Univ. Micro. No. 57-4831).

Farnsworth, Paul R. "Familiarity with the Names of Musicians." J. Appl. Psychol., 18 (1934), 97-102.

_____. "Auditory Acuity and Musical Ability in the First Four Grades." J. Psychol., 6 (1938), 95-98.

_____. "Ratings in Music, Art, and Abnormality, in the First Four Grades." J. Psychol., 6 (1938), 89-94.

Farnum, Stephen E. "Prediction of Success in Instrumental Music." Unpublished Doctoral Dissertation, Harvard University, 1950. 190 pp. (Ed.D.).

Fenton, Winnifred L. "Effectiveness of Music Teachers Identified Through Behavioral Criteria: A Basis for Redirection in Teacher Education." Unpublished Doctoral Dissertation, Wayne State University, 1957. 228 pp. (Ed.D.). (Univ. Micro. No. 58-1177).

Fisher, Rhoda L. "Preferences of Different Age and Socio-economic Groups in Unstructured Musical Situations." J. Soc. Psychol., 33 (February, 1951), 147-152.

Fisher, William R. "The Construction and Validation of an Instrument to Measure Musical Appreciation." Unpublished Doctoral Dissertation, Boston University, 1949. 130 pp. (Ed.D.).

Fite, Kenneth A. "Cost of Participating in Music Activities in Selected High Schools of Kansas." Unpublished Doctoral Dissertation, University of Kansas, 1954. 106 pp. (Ed.D.).

Fletcher, Arnold. "Problems of a Group of Beginning Music Teachers: A Follow-Up Study of Recent Graduates of West Chester State Teachers College." Unpublished Doctoral Dissertation, University of Pennsylvania, 1956. 308 pp. (Ed.D.).

Forman, Robert B. "The Extent of Agreement in Attitudes Toward Music Education Practices Among Southern Illinois High School Students as Measured by Kendall's 'Tau'." Unpublished Doctoral Dissertation, The Florida State University, 1958. 213 pp. (Ed.D.). (Univ. Micro. No. 58-2788).

Fott, Solie. "The Youth Education Activities of the Nashville Symphony Association." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958, 112 pp. (Ph.D.). (Univ. Micro. No. 59-1097).

Franks, Dean K. "A Study of the Success of West Seattle High School Students in Language Arts, Foreign Language, Social Studies and Music and Art." Unpublished Doctoral Dissertation, University of Washington, 1958. 207 pp. (Ed.D.). (Univ. Micro. No. 58-3273).

Fred, Bernhart G. "The Instructional Values of an Exploratory String Instrument in a Fourth Grade." Unpublished Doctoral Dissertation, Northwestern University, 1956. 250 pp. (Ph.D.). (Univ. Micro. No. 57-4231).

Freeburne, Frederick G. "Functional Secondary Piano Training of Music Teachers." Unpublished Doctoral Dissertation, Indiana University, 1952. 234 pp. (Ph.D.). (Univ. Micro. No. A53-2076).

Freeman, Warren S. "A Survey and Evaluation of the Current Status of Music Education Activities in the Public Schools of the United States." Unpublished Doctoral Dissertation, Boston University, 1955. 193 pp. (Ed.D.). (Univ. Micro. No. 15-082).

French, Elizabeth I. "A Study of the Relationship of Scores Obtained on the Gaston Test of Musicality and the Seashore Measures of Musical Talent to Responses to Four Thematic Apperception Test Pictures." Unpublished Educational Research Study, University of Tennessee, 1962. 76 pp.

Friend, Ruby S. "An Experimental Investigation of the Seashore Musical Tests with Special Reference to Their Reliability for Children of Kindergarten Age, and to the Relationship Between the Children and Their Parents in the Performance on These Tests." Unpublished Master's Thesis, University of Minnesota, 1930. 47 pp. (M.A.).

_____. "Influences of Heredity and Musical Environment on the Scores of Kindergarten Children on the Seashore Measures of Musical Ability." J. Appl. Psychol., 23 (1939), 347-357.

Gaffney, James C. "An Investigation of the High School Dance Band as an Aid to Music Education in the Public Schools of Missouri." Unpublished Master's Thesis, University of Denver, 1959. 79 pp. (M.A.).

Garder, Clarence E., Jr. "A Study of Characteristics of Outstanding High School Musicians." Unpublished Doctoral Dissertation, University of Kansas, 1953. 129 pp. (Ed.D.).

Garretson, Robert L. "A Study to Identify Specific Teaching Problems Confronting Illinois High School Choral Directors." Unpublished Project Report, Teachers College, Columbia University, 1955. 188 pp. (Ed.D.).

Gaston, E. Thayer. "A Study of the Trends of Attitudes Toward Music in School Children with a Study of the Methods Used by High School Students in Sight-Reading Music." Unpublished Doctoral Dissertation, University of Kansas, 1940. 194 pp. (Ph.D.).

Genge, Milton H. "Guidance and Selective Retention Practices in Music Teacher Training." Unpublished Doctoral Dissertation, University of Southern California, 1959. 426 pp. (Ed.D.). (Univ. Micro. No. 59-2935).

Gernet, Sterling K. "Musical Discrimination at Various Age and Grade Levels." Unpublished Doctoral Dissertation, Temple University, 1939. 172 pp. (Ph.D.).

Gilbert, J. Richard. "A Study of Some of the Traits of Secondary School Instrumentalists and the Relationship of These Traits to Achievement in Instrumental Music." Unpublished Master's Thesis, Syracuse University, 1943. 207 pp. (M.M.).

Gilfeather, Charlotte V. "Motivation of the Below Average Adolescent in Junior High School General Music Classes." Unpublished Master's Thesis, Texas Christian University, 1962. 76 pp. (M.M.E.).

Goetzmann, Edward C. "An Investigation of Specific Factors Related to Minor Performance Area Classes in Music Education Curricula." Unpublished Project Report, Teachers College, Columbia University, 1962. 200 pp. (Ed.D.). (Univ. Micro. No. 63-2252).

Good, Melvin L. "Music in Selected Virginia Elementary Schools Having No Music Specialist or Music Supervisor." Unpublished Doctoral Dissertation, University of Virginia, 1961. 224 pp. (Ed.D.). (Univ. Micro. No. 61-4543).

Gordon, Edwin. "A Study to Determine the Effects of Training and Practice on Drake Musical Aptitude Test Scores." Unpublished Doctoral Dissertation, State University of Iowa, 1958. 89 pp. (Ph.D.). (Univ. Micro. No. 58-2959).

Graves, Winifred S. "Adolescents' Musical Training as a Function of Parent-Child Relationships and Associated Personality Variables." Unpublished Doctoral Dissertation, Columbia University, 1950. 106 pp. (Ph.D.). (Univ. Micro. No. A50-574).

Gray, John J. "Subject Matter Testing Practices in State University Music Education Curricula." Unpublished Doctoral Dissertation, University of Southern California, 1960. 373 pp. (D.M.A.). (univ. Micro. No. 60-6203).

Gray, Thomas L. "An Investigation of the Changes in Teaching Concepts of Student Teachers of Music." Unpublished Doctoral Dissertation, State University of Iowa, 1962, 118 pp. (Ph.D.). (Univ. Micro. No. 63-924).

Groff, Patrick J. "Self-Estimates of the Ability to Teach Music." Music Educ. J., 48 (February-March, 1962), 140-141.

Grove, Eugene F. "Three Areas of Student Personnel Services for Undergraduates Majoring in Music Education." Unpublished Doctoral Dissertation, Indiana University, 1953. 226 pp. (Ed.D.). (Univ. Micro. No. A54-217).

Hales, Bernell W. "A Study of Music Reading Programs in High School Choruses in the Rocky Mountain States." Unpublished Doctoral Dissertation, University of Oregon, 1961. 142 pp. (Ed.D.). (Univ. Micro. No. 61-4524).

Hammer, Harry. "An Experimental Study of the Use of the Tachistoscope in the Teaching of Melodic Sight-Singing." Unpublished Doctoral Dissertation, University of Colorado, 1961, 309 pp. (Ed.D.). (Univ. Micro. No. 62-1245).

Hargiss, Genevieve. "The Acquisition of Sight Singing Ability in Piano Classes." Unpublished Doctoral Dissertation, University of Kansas, 1960. 174 pp. (Ed.D.). (Univ. Micro. No. 60-1851).

Harlan, Henry G. "An Analysis and General Evaluation of Public School Courses of Study in Music." Unpublished Doctoral Dissertation, University of Texas, 1940. 239 pp. (Ph.D.).

Harrison, Russell M. "A Survey of Public School Instrumental Music in Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1954. 243 pp. (Ed.D.).

Hartzell, Ralph E. "An Exploratory Study of Tonality Apprehension and Tonal Memory in Young Children." Unpublished Doctoral Dissertation, University of Cincinnati, 1949. 208 pp. (Ed.D.).

Hattwick, Melvin S. "The Role of Pitch Level and Pitch Range in the Singing of Pre-School, First Grade and Second Grade Children." Child Development, 4 (1933), 281-291.

Havlovic, Arthur J. "A Survey of Boys' Voices and Song Material in the Senior High School." Unpublished Master's Thesis, University of Cincinnati, 1937. 44 pp. (M.E.).

Heffernan, Helen W., and Ralph Matesky. "Organization and Supervision of Music Education in Elementary Schools of California Cities." Calif. J. of Elem. Educ., 24 (August, 1955), 197-203.

Heiliger, Louise A. "The Effect of Training upon the Musical Performance of Five-Year-Old Children." Unpublished Master's Thesis, State University of Iowa, 1936. 68 pp. (M.A.).

Henderson, Stanley L. "Factors, Differences, Trends and Relationships in the Administration and Supervision of Music in Fourteen Selected School Systems." Unpublished Doctoral Dissertation, State University of Iowa, 1959. 218 pp. (Ph.D.). (Univ. Micro. No. 59-3797).

Henry, Edna L. "Intrinsic Interests of Adolescents as Indicated by Their Choice of Out-of-School Activities." Unpublished Doctoral Dissertation, Northwestern University, 1941. 255 pp. (Ph.D.).

Herren, Lloyd K. "A Study of the Administration of Student-Teaching Courses for Music Education Majors in Texas Schools and Colleges." Unpublished Doctoral Dissertation, University of Texas, 1955. 324 pp. (Ed.D.).

Hevner, Kate. "Tests for Esthetic Appreciation in the Field of Music." J. Appl. Psychol., 14 (1930), 470-477.

_____. "A Study of Tests for the Appreciation of Music." J. Appl. Psychol., 15 (1931), 575-583.

Hills, Richard L. "The Status of Music Instruction in the Public High Schools of Missouri." Unpublished Doctoral Dissertation, State University of Iowa, 1962. 224 pp. (Ph.D.). (Univ. Micro. No. 62-2393).

Hixson, Paula M. "The Status of Junior High School Choral Music in the State of Texas." Unpublished Master's Thesis, University of Texas, 1953. 71 pp. (M.M.).

Hollingsworth, Beverly J. "A Survey of the Status of the General Music Program in the Junior High Schools of Texas." Unpublished Master's Thesis, University of Texas, 1953. 69 pp. (M.M.E.).

Holzhauer, Albert J. "Reminiscence in the Memorization of Instrumental Music by High School Pupils." Unpublished Master's Thesis, University of Cincinnati, 1941. 57 pp. (M.E.).

Hughes, Dorothy T. "A Study of the Musical Taste of Junior High School Students in Relation to Environmental Influences." Unpublished Master's Thesis, New York University, 1932. 144 pp. (M.A.).

Hutcherson, Rita J. "Group Instruction in Piano: An Investigation of the Relative Effectiveness of Group and Individual Piano Instruction at Beginning Level." Unpublished Doctoral Dissertation, State University of Iowa, 1955. 257 pp. (Ph.D.). (Univ. Micro. No. 55-145).

Janszen, Royce H. "The Organization and Administration of Off-Campus Student Teaching in Music at Selected Institutions." Unpublished Project Report, Teachers College, Columbia University, 1962. 356 pp. (Ed.D.). (Univ. Micro. No. 63-2260).

Jeffrey, Wendell E. "Variables in Early Discrimination Learning: II. Mode of Response and Stimulus Difference in the Discrimination of Tonal Frequencies." Child Dev., 29:4 (December, 1958), 531-538.

Jenkins, Thomas V. "A Study of the Relationship Between Music Aptitudes and Mental Ability, Science Aptitudes, and Mathematics Aptitudes Among Secondary School Pupils in Texas." Unpublished Doctoral Dissertation, The University of Texas, 1960. 89 pp. (Ph.D.). (Univ. Micro. No. 60-6625).

Jersild, Arthur T., and Sylvia F. Bienstock. "A Study of the Development of Children's Ability to Sing." J. Educ. Psychol., 25:7 (October, 1934), 481-503.

_____. Development of Rhythm in Young Children. New York: Bureau of Publications, Teachers College, Columbia University, 1935. 105 pp.

Johnson, Gordon B. "Negative Practice on Band Instruments: An Exploratory Study." J. Res. Music Educ., 10 (Fall, 1962), 100-104.

Johnson, Martin O. "The Philosophies and Attitudes of Selected Music Teachers Toward Music Education." Unpublished Research Study No. 1, Colorado State College, 1961. 257 pp. (Ed.D.). (Univ. Micro. No. 61-6998).

Jones, Donald W. "A Comparative Study of Selected Issues in Music Education as Represented in the Opinions of Principals, Music Teachers and Professors of Music Education." Unpublished Doctoral Dissertation, The Ohio State University, 1961. 283 pp. (Ph.D.). (Univ. Micro. No. 62-779).

Joseph, Warren A. "The Relationship Between Vocal Growth in the Human Adolescent, and the Total Growth Process." Unpublished Doctoral Dissertation, Boston University, 1959. 184 pp. (Ph.D.). (Univ. Micro. No. 59-3467).

Kaplan, Lionel. "The Relationship Between Certain Personality Characteristics and Achievement in Instrumental Music." Unpublished Doctoral Dissertation, New York University, 1961. 195 pp. (Ph.D.). (Univ. Micro. No. 61-2553).

Keiser, Grace F. "The Musical Achievement of Two Classes in Junior High General Music Taught by Two Different Methods." Unpublished Master's Thesis, University of Kansas, 1957. 190 pp. (M.M.E.).

Kelly, William L. "Beliefs and Practices of Administrators and Musicians from Selected Midwestern Cities Concerning the Importance and Functions of Music in the Public Schools." Unpublished Doctoral Dissertation, University of Kansas, 1962. 164 pp. (Ed.D.).

Keston, M. J. "An Experimental Evaluation of the Efficacy of Two Methods of Teaching Music Appreciation." J. Exper. Educ., 22 (March, 1954), 215-226.

Kiely, Dennis K. "An Evaluation of the Competencies of Beginning Elementary Classroom Teachers in Music Theory and Singing in Various Teacher-Training Institutions of New England." Unpublished Doctoral Dissertation, Boston University, 1956. 206 pp. (Ed.D.). (Univ. Micro. No. 56-2297).

Kingsbury, Charles L. "Harmony Skills Used by Selected High School Instrumental Music Teachers." Unpublished Doctoral Dissertation, Indiana University, 1945. 166 pp. (Ed.D.).

Klein, Arthur F. "Elementary Teacher's Judgments Regarding the Adequacy of Their Music Preparation." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1955. 178 pp. (Ph.D.). (Univ. Micro. No. 56-209).

Kuhn, Wolfgang E. "A Study and Appraisal of Music Education in Selected Public Schools of Illinois." Unpublished Doctoral Dissertation, University of Illinois, 1953. 220 pp. (Ed.D.). (Univ. Micro. No. 5483).

Kyme, George H. "Are Musical Tastes Indicative of Musical Capacity?" J. of Res. Music Educ., 4:1 (Spring, 1956), 44-51.

_____. "An Experiment in Teaching Children to Read Music with Shape Notes." J. Res. Music Educ., 8:1 (Spring, 1960), 3-8

Lamp, Charles J. "The Determination of Aptitude for Specific Musical Instruments." Unpublished Doctoral Dissertation, University of California at Berkeley, 1933. 84 pp. (Ed.D.).

_____., and Noel Keys. "Can Aptitude for Specific Musical Instruments be Predicted?" J. Educ. Psychol., 26:7 (November, 1935), 587-596).

Landon, Joseph W. "Music Supervision in California City Schools." Unpublished Doctoral Dissertation, Southern California University, 1959. 895 pp. (Ed.D.). (Univ. Micro. No. 59-1851).

Lawson, Gerald L. "The Status of Music in Iowa High Schools." Unpublished Doctoral Dissertation, State University of Iowa, 1960. 116 pp. (Ph.D.). (Univ. Micro. No. 60-5672).

Lease, Gus C. "A Study of the Musicality, Intelligence and Music Achievement of Vocalists and Instrumentalists in Selected High Schools." Unpublished Doctoral Dissertation, State University of South Dakota, 1959. 165 pp. (Ed.D.). (Univ. Micro. No. 60-810).

LeBow, Mary R. T. "University Organization for the Undergraduate Education of Music Teachers." Unpublished Doctoral Dissertation, Wayne State University, 1960. 367 pp. (Ed.D.). (Univ. Micro. No. 60-2330).

Livingstone, Jane C. "A Study of the English Madrigal and its use in the High School Vocal Program." Unpublished Master's Thesis, New England Conservatory of Music, 1957. 91 pp. (M.M.E.).

Lotzenhiser, George W. "An Analysis and Evaluation of State Courses of Study in Music with Special Reference to Instrumental Music." Unpublished Doctoral Dissertation, University of Oregon, 1956. 224 pp. (Ed.D.).

Ludwig, Merlin A. "Current Practices and Problems in Scheduling Co-Curricular Activities in Public Secondary Schools in the Midwest." Unpublished Doctoral Dissertation, State University of Iowa, 1962. 355 pp. (Ph.D.). (Univ. Micro. No. 63-943).

Luke, Orral S. "Differences in Musical Aptitude in School Children of Different National and Racial Origin." Unpublished Doctoral Dissertation, University of California at Berkeley, 1939. 160 pp. (Ed.D.).

Lustre, Warren W. "An Experiment Comparing Three Methods of Learning Selected Aural Harmonies." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958. 148 pp. (Ed.D.). (Univ. Micro. No. 59-1718).

McCaslin, Richard E. "A Study of Extra-Curricular Activities in Three Secondary Schools of Baltimore County." unpublished Doctoral Dissertation, University of Maryland, 1958. 173 pp. (Ed.D.). (Univ. Micro No. 58-2220).

McCauley, Clara J. "Course of Study: Grades I Through VIII." in A Professionalized Study of Public School Music. Knoxville: Joseph Avent, 1932, 313-592.

McCorkel, Thomas S. "Recent American Educational Theories on the Place and Function of the Fine Arts in the Public School Program." Unpublished Doctoral Dissertation, University of Texas, 1942. 298 pp. (Ph.D.).

MacOwan, Thomas D. "Pressures that are Brought to Bear Upon Certain Activities of the Public Secondary Schools of Indiana by Nonschool Affiliated Adult Interest Organizations." Unpublished Doctoral Dissertation, Indiana University, 1955. 222 pp. (Ed.D.). (Univ. Micro. No. 55-1004).

Manor, Harold C. "A Study in Prognosis: The Guidance Value of Selected Measures of Musical Aptitude, Intelligence, Persistence, and Achievement in Tonette and Adaptation Classes for Prospective Instrumental Students." J. Educ. Psychol., 41:1 (January, 1950), 31-50.

Matesky, Ralph and Helen Heffernan. "The Status of Instrumental Music Education in the Elementary Schools of California Cities." California J. Elem. Educ., 24:1 (August, 1955), 204-216.

Michael, William B., George Barth, and Henry F. Kaiser. "Dimensions of Temperament in Three Groups of Music Teachers." Psychol. Reports, 9 (1961), 701-704.

Mitchell, John W. "A Study of Activities and Projects Offered by United States Colleges and Universities for In-Service Education in Music." Unpublished Doctoral Dissertation, The University of Wisconsin, 1958. 167 pp. (Ph.D.). (Univ. Micro. No. 58-7517).

Mohr, Estell E. "Music Teaching Problems of Colorado Elementary School Teachers." Unpublished Doctoral Dissertation, Stanford University, 1946. 356 pp. (Ed.D.).

Mosher, Raymond M and Adolph W. Otterstein. "How We Predict Success in Music Curriculum." School Music, 34 (March, 1934), 12-13.

Mueller, Paul R. "The Status of the Junior High School General Music Class in California." Unpublished Master's Thesis, Fresno State College, 1960. 70 pp. (M.A.).

Music Educators National Conference. "The Present Status of School Music Instruction." Music Educ. Res. Council Bull. No. 16, Chicago: The Conference, 1934. 32 pp.

Nagro, Constantino F. "An Analysis of Certain Factors Relative to the Promotion of Interest in the Study of Musical Instruments." Unpublished Doctoral Dissertation, Chicago Musical College, 1954. 141 pp. (D.M.Ed.).

Nash, Louis P. "The Enjoyment of Music by Junior High Students: Their Responses to Five Methods of Presenting Recorded Music." Unpublished Doctoral Dissertation, University of California at Berkeley, 1962. 234 pp. (Ed.D.). (Univ. of Calif. Micro. No. CU-5840).

Neal, Charles D. "Carry-Over of Musical Activities Following Graduation from High School." Unpublished Doctoral Dissertation, Indiana University, 1948. 270 pp. (Ed.D.).

Nelson, Carl B. "An Experimental Evaluation of Two Methods of Teaching Music in the Fourth and Fifth Grades." Unpublished Doctoral Dissertation, University of Minnesota, 1954. 305 pp. (Ph.D.). (Univ. Micro. No. A54-1807).

_____. "A Follow-up of an Experimental Teaching Method in Music at the Fourth and Fifth Grade Levels." J. of Exper. Educ., 24 (June, 1956), 283-289.

Nelson, Marvin G. "A Comparative Study of Instrumental Music Programs in Selected School Systems in Four North Central States." Unpublished Doctoral Dissertation, Chicago Musical College, 1955. 146 pp. (D.M.Ed.).

Nelson, Russel C. "A Physiological Study of the Utilization of the Vital Capacity in Phonation, Resonation and Articulation, and Its Effect on Tonal Quality in the Adolescent." Unpublished Doctoral Dissertation, University of Michigan, 1954. 376 pp. (Ph.D.). (Univ. Micro. No. A55-656).

Nicholson, Robert A. "The Harmonic Preparation of the High School Choral Conductor." Unpublished Doctoral Dissertation, New York University, 1952. 154 pp. (Ph.D.). (Univ. Micro. No. A53-2078).

Noah, Max S. "Promotion of Music Education by Southern State Departments of Education." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1953. 202 pp. (Ph.D.).

Nohavec, Hazel B. "The Ability Pattern of Senior College Students Majoring in Music Education at the University of Minnesota." Unpublished Doctoral Dissertation, University of Minnesota, 1943. 398 pp. (Ph.D.).

Osborn, Murray J. "The Matching of Vowel Quality in Singing." Unpublished Master's Thesis, Illinois State Normal University, 1955. 56 pp. (M.S.).

Park, S. Norman. "Attitudes of Adolescents in Music." Unpublished Master's Thesis, Colorado State College of Education, 1944. 225 pp. (M.A.).

Parker, Olin G. "A Study of the Relationship of Aesthetic Sensitivity to Musical Ability, Intelligence, and Socio-Economic Status." Unpublished Doctoral Dissertation, University of Kansas, 1961. 168 pp. (Ed.D.). (Univ. Micro. No. 61-5028).

Patrick, Donald W. "A Comparative Study of Musical Achievement of the General Chorus and General Music Approach at the Junior High School Level." Unpublished Master's Thesis, University of Kansas, 1952. 54 pp. (M.M.Ed.).

Patrick, Nelson G. "A Comparative Study of Music Education in Texas Four-Year Colleges and Universities." Unpublished Doctoral Dissertation, University of Texas, 1955. 379 pp. (Ed.D.).

Peitersen, Dana N. "An Experimental Evaluation of the Transfer Effects of Rhythm Training in Spaced Notation on Subsequent Reading of Commercially Printed Music." Unpublished Doctoral Dissertation, University of Minnesota, 1954. 312 pp. (Ph.D.). (Univ. Micro. No. A54-1443).

Pence, Don P. "A Study to Determine the Optimum Grade for Beginning Class Study of Wind Instruments." Unpublished Master's Thesis, University of Kansas, 1942. 84 pp. (M.A.).

Peterson, Harold W. "Problem Areas in Music Education." Unpublished Doctoral Dissertation, Yale University, 1956. 231 pp. (Ph.D.).

Peterson, Ruth D. "An Investigation of Academic Music Courses in the Public Secondary Schools of Missouri." Unpublished Master's Thesis, Northeast Missouri State Teachers College, 1962. 141 pp. (M.A.).

Peterson, Wilbur J. "Organizational Plans Favored by Administrators for Elementary School General Music." Music Educ. J., 43 (January, 1957), 48-49.

Petzold, Robert G. "The Applied Music Skills Which Prospective Teachers of High School Instrumental Music Need." Unpublished Doctoral Dissertation, University of Wisconsin, 1950. 235 pp. (Ph.D.).

_____. "Development of Auditory Perception of Musical Sounds by Children in the First Six Grades." Report of Cooperative Research Project No. 766 (SAE 8411), University of Wisconsin, 1960. 125 pp.

_____. "The Perception of Music Symbols in Music Reading by Normal Children and by Children Gifted Musically." J. Exper. Educ., 28 (June, 1960), 271-319.

Phelps, Mildred W. "The Teaching of String Instruments in the Instrumental Techniques Course." Unpublished Doctoral Dissertation, State University of Iowa, 1951. 279 pp. (Ph.D.).

Pittsburgh (Pennsylvania) Public Schools, Department of Curriculum and Research. "An Experimental Study of the Value of Instrumental Training in Public School Music." Pittsburgh Schools, 11:2 (November-December, 1936), 49-58.

Pottle, Ralph R. "Intonation Problems in School Bands." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1943. 168 pp. (Ph.D.). (Joint Univ. Lib. Micro.).

Price, David E. "An Analysis of Some of the Musical Experiences Provided for Students in the Tenth, Eleventh, and Twelfth Grades in the Public Secondary Schools Approved by the North Central Association." Unpublished Doctoral Dissertation, University of Colorado, 1950. 242 pp. (Ed.D.).

_____. "Music for Every Child (Except 53.3%)." Music Educ. J., 39 (June-July, 1953), 45.

Price, Robert T. "Community Pressures and Their Influence in Selected Secondary School Music Programs." Unpublished Master's Thesis, The Ohio State University, 1960. 113 pp. (M.A.).

Priestly, Ehud. "Pitch Discrimination and Certain Characteristics of Fifth, Seventh, and Ninth Grade Children." Unpublished Doctoral Dissertation, New York University, 1942. 141 pp. (Ph.D.).

Procopio, Dominic R. "The Construction and Validation of Techniques for Self-Development in Rhythmic, Melodic, and Harmonic Dictation for Music Education Majors." Unpublished Doctoral Dissertation, Boston University, 1956. 199 pp. (Ph.D.).

Ramm, Katherine M. "Personality Maladjustment Among Monotones." Smith Coll. Stud. Social Work, 17:4 (1947), 264-284.

Rhinehart, Charles B., Jr. "Incidence and Causes of Withdrawal from Public School Music Teaching." Unpublished Doctoral Dissertation, The Florida State University, 1962. 118 pp. (Ph.D.). (Univ. Micro. No. 63-4390).

Rhoades, Fordyce L. "An Evaluation of Measures for the Prediction of Success in Instrumental Music Study." Unpublished Master's Thesis, University of Washington, 1938. 73 pp. (M.A.).

Richman, Luther A. "The Status of Music Education in the Public Schools of Virginia." Unpublished Doctoral Dissertation, University of Cincinnati, 1938. 255 pp. (Ed.D.).

Robins, Miriam C. "A Study of Variances in Private Piano Backgrounds of Selected Secondary School Students to Better Determine the Aims and Responsibilities of the Private Teaching Profession." Unpublished Master's Thesis, University of Denver, 1959. 153 pp. (M.A.).

Roe, Paul F. "The Internal Administrative Organization in High School Music Education." Unpublished Doctoral Dissertation, University of Nebraska, 1960. 240 pp. (Ph.D.). (Univ. Micro. No. 60-4510).

Rogers, Vincent R. "Children's Expressed Musical Preferences at Selected Grade Levels." Unpublished Doctoral Dissertation, Syracuse University, 1956. 159 pp. (Ed.D.). (Univ. Micro. No. 56-3047).

Rubin, Louis. "The Effects of Musical Experience on Musical Discrimination and Musical Preferences." Unpublished Doctoral Dissertation, University of California at Berkeley, 1952. 208 pp. (Ph.D.). (Univ. Calif. Micro. No. CU-147).

Scheuerle, Paul N. "A Study and Evaluation of Instrumental Music Programs in the Public Secondary Schools of the United States." Unpublished Doctoral Dissertation, Boston University, 1959. 449 pp. (D.M.A.).

Schmitz, Sylvester M. "An Investigation of the Prognostic Value of the Revised Seashore Tests and the Kwalwasser-Ruch Test of Musical Accomplishment for Academic Success in a Music Education Program." Unpublished Doctoral Dissertation, Northwestern University, 1956. 183 pp. (Ph.D.). (Univ. Micro. No. 57-4838).

Schroer, Albert W. "A Study of the Factors Influencing Students Choosing the Music Education Curriculum in College." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1956. 142 pp. (Ed.D.). (Univ. Micro. No. 57-451).

Sell, Marion W. "Preference for Band or Orchestra as an Esthetic Medium for Music Among Public School Students." Unpublished Master's Thesis, University of Kansas, 1950. 57 pp. (M.M.E.).

Shadley, Maurice F. "A Study of the Instrumental Music Program in the High Schools of the State of Indiana (1949-50)." Unpublished Doctoral Dissertation, Indiana University, 1951. 295 pp. (Ed.D.).

Shepard, Eugene L. "Measurement of Certain Nonverbal Abilities of Urban and Rural Children." J. Educ. Psychol., 33 (1942), 458-462.

Shetler, Donald J. "The Content Evaluation of Selected Music Programs Produced for the National Educational Television and Radio Center." Unpublished Doctoral Dissertation, University of Michigan, 1961. 349 pp. (Ed.D.). (Univ. Micro. No. 61-1785).

Shull, Carl N. "A Study of Children's Vocal Literature Written by Selected Distinguished Composers." Unpublished Doctoral Dissertation, The Florida State University, 1961. 257 pp. (Ph.D.). (Univ. Micro. No. 61-3648).

Sievers, C. H. "The Measurement of Musical Development: II. A Study of Rhythmic Performance With Special Consideration of the Factors Involved in the Formation of a Scale for Measuring Rhythmic Ability." Univ. Iowa Studies Child Welfare, 7:1 (1932), 111-172.

Silverman, Herbert H. "A Comparison of the Keyboard and the Vocal Approach in the Teaching of Primary Music Theory." Unpublished Doctoral Dissertation, Boston University, 1954. 277 pp. (Ed.D.).

Silvey, Clel T. A Study of Personal Reactions to the Solmization Method of Teaching Music Reading. ("Peabody College Contr. to Educ."). Nashville, Tennessee: George Peabody College for Teachers, 1937. 82 pp. (Ph.D.).

Simmons, Donald W. "The Motivations and Musical Backgrounds of Participants and Non-Participants in Selected Community Choruses." Unpublished Doctoral Dissertation, University of Illinois, 1962. 121 pp. (Ed.D.). (Univ. Micro. No. 63-3333).

Sims, Francis J. "An Experimental Investigation of the Relative Effectiveness of Group and Individual Voice Instruction at the Beginning Level to High School Students." Unpublished Doctoral Dissertation, The University of Oklahoma, 1961. 197 pp. (Ed.D.). (Univ. Micro. No. 61-4902).

Skornicka, Joseph E. "The Function of Time and Rhythm in Instrumental Music Reading Competency." Unpublished Doctoral Dissertation, Oregon State College, 1958. 83 pp. (Ed.D.). (Univ. Micro. No. 58-3059).

Smiley, Edra M. "A Study of the Musical Configurations, Symbols, Terms and Words found in Basic Music Texts at the Fourth Grade Level." Unpublished Doctoral Dissertation, Indiana University, 1955. 226 pp. (Ed.D.). (Univ. Micro. No. A55-2171).

Smith, Samuel. "Music Supervision in Connecticut Public Schools: Case Studies, Methods, Recommendations, Principles." Unpublished Doctoral Dissertation, New York University, 1933. 772 pp. Vol. 1-2, (Ph.D.).

Smith, William O. "An Analysis of the Music Education Programs Administered by the North Central States' Departments of Education." Unpublished Doctoral Dissertation, The State University of Iowa, 1957. 155 pp. (Ph.D.). (Univ. Micro. No. 57-4840).

Smith, Yevola R. "An Investigation of the Availability and Utilization of Audio-Visual Materials in General Music Classes in Selected Maryland Public Junior High Schools." Unpublished Master's Thesis, Boston University, 1957. 105 pp. (M.M.).

Smyers, Myllan. "The Status of Music in the Elementary Schools in West Virginia." Unpublished Doctoral Dissertation, Indiana University, 1955. 171 pp. (Ed.D.). (Univ. Micro. No. A55-2172).

Snapp, Kenneth O. "Development of a Musicians Interest Inventory for Use in Vocational and Educational Guidance." Unpublished Doctoral Dissertation, Indiana University, 1953. 239 pp. (Ph.D.). (Univ. Micro. No. A53-1530).

Snyder, Jack F. "Techniques and Practices for Effecitive Supervision of Student Teachers in Music." Unpublished Doctoral Dissertation, The University of Nebraska, 1961. 208 pp. (Ed.D.). (Univ. Micro. No. 62-138).

Soares, Louise M. G. "Adjustment of Music, Science and Physical Education Majors in Teacher-Training." Unpublished Doctoral Dissertation, University of Illinois, 1962. 159 pp. (Ed.D.). (Univ. Micro. No. 63-3340).

Sperry, Gale L. "A Study of Music Education Graduates from the University of Minnesota (1947-1956) with Particular Reference to Their Participation and Persistence in the Profession." Unpublished Doctoral Dissertation, University of Minnesota, 1958. 268 pp. (Ph.D.). (Univ. Micro. No. 58-2162).

Stanton, Hazel M. and Wilhelmine Koerth. "Musical Capacity Measures of Children Repeated After Musical Training." Univ. Iowa Studies Series on Aims and Progress of Research, No. 42, 1933. 48 pp.

Steg, Olaf W. "Student Teaching for Music Majors." Unpublished Doctoral Dissertation, Northwestern University, 1948. 251 pp. (Ph.D.).

_____. "The Total Work-Load of High School Music Teachers in Michigan." J. Res. Music Educ., 3 (Fall, 1955), 101-118.

Stene, Agnes N. "A Survey of the Extent of Participation in Choral Music Classes Offered to California Junior High School Pupils in the Accelerated Academic Program." Unpublished Master's Thesis, University of Washington, 1961. 62 pp. (M.Ed.).

Stephenson, Jack R. "A High School Music Curriculum Planned in Terms of the Cultural Pattern of a Community and the Needs of High School Youth." Unpublished Doctoral Dissertation, University of Kansas, 1955. 285 pp. (Ph.D.).

Stokes, Charles F. "An Experimental Study of Tachistoscopic Training in Reading Music." Unpublished Doctoral Dissertation, University of Cincinnati, 1944. 206 pp. (Ed.D.).

Streep, Rosalind. "A Comparison of White and Negro Children in Rhythm and Consonance." J. Applied Psychol., 15 (February, 1931), 53-71.

Strub, Paul. "The Undergraduate Characteristics of Successful Public School Music Teachers." Unpublished Doctoral Dissertation, University of Kansas, 1957. 195 pp. (Ed.D.).

Sur, William R. "Experimental Study of the Teaching of Music Understanding by Radio." Unpublished Doctoral Dissertation, University of Wisconsin, 1940. 314 pp. (Ph.D.).

_____. Piano Instruction in the Schools. Chicago: Music Education National Conference, 1949. 63 pp.

Swanson, Frederick J. "Voice Mutation in the Adolescent Male: An Experiment in Guiding the Voice Development of Adolescent Boys in General Music Classes." Unpublished Doctoral Dissertation, The University of Wisconsin, 1959. 310 pp. (Ph.D.). (Univ. Micro. No. 59-6977).

Swinchoski, Albert A. "A Standardized Music Achievement Test Battery for the Intermediate Grades." J. Res. Mus. Educ., 13:3 (Fall, 1965), 159-168.

Tarpley, Harold B. "An Experimental Study in the Use of Motion Picture Music in the Junior and Senior High School Music Class." Unpublished Master's Thesis, University of Kansas, 1954. 126 pp. (M.M.E.).

Taylor, Corwin H. "Prevailing Practices in the Supervision of Instrumental Music." J. Res. Music Educ., 10:1 (Spring, 1962), 30-38.

Theno, E. Charles. "A Study of Orlando Di Lasso's Choral Works with Reference to School Performance." Unpublished Doctoral Dissertation, University of Oregon, 1954. 216 pp. (Ed.D.).

Tietze, William B. "The Effect of Pre-Band Melody and Rhythm Instruments on the Musical Learning of Beginning Fourth Grade Instrumental Students." Unpublished Doctoral Dissertation, State University of Iowa, 1958. 108 pp. (Ph.D.). (Univ. Micro No. 58-5868).

Tilson, Lowell M. "Music Talent Tests for Teacher-Training Purposes." Music Supervisors J., 18:3 (February, 1932), 26-27.

_____. "Follow-up Study of Graduates from the Four Year Music Supervisors Course." School Music, 34 (May-June, 1934), 12-13.

Tippetts, Twain C. "Value Systems of Teachers in Creative Arts Compared with Those of Administrators and Teachers in Other Areas." Unpublished Doctoral Dissertation, University of California at Los Angeles, 1960. 132 pp. (Ed.D.).

Trzcinski, Louis C. "A Study of Extension String Programs." Unpublished Research Study No. 1, Colorado State College, 1962. 318 pp. (Ed.D.). (Univ. Micro. No. 63-1135).

Uldrick, Johnnye M. "An Investigation of Curriculum Guides in Music in the Fifty States of the United States with Emphasis on the Guides for Senior High School Music." Unpublished Master's Thesis, Clemson College, 1961. 56 pp. (M.S.).

Utgaard, Merton B. "Analysis of the Teaching Content Found in Ensemble Music Written for Brass Wind Instruments." Unpublished Field Study, No. 1, Colorado State College of Education, 1949. 213 pp. (Ed.D.). (C.S.C.E. Micro.)

Van Sickle, Howard M. "An Exploratory and Descriptive Study of the Interpersonal Factors and Group Dynamics in the Instrumental Music Groups." Unpublished Doctoral Dissertation, Chicago Musical College, Roosevelt University, 1955. 347 pp. (M.Ed.D.).

Von Ende, Richard C. "The Administration of Music Education in the Public Schools of Large Cities." Unpublished Doctoral Dissertation, University of Pittsburgh, 1941. 240 pp. (Ph.D.).

Ward, Ted W. "The Experimental Testing of a Concept of Perception with Implications for Music Education." Unpublished Doctoral Dissertation, The University of Florida, 1956. 156 pp. (Ed.D.). (Univ. Micro. No. 56-3350).

Warren, John R. "Music Elections by Academically Talented Students in Florida High Schools." Unpublished Doctoral Dissertation, The Florida State University, 1961. 238 pp. (Ph.D.). (Univ. Micro. No. 61-5662).

Wassum, Sylvesta M. "An Appraisal of Some Philosophic Implications of Elementary School Music: A Study of Selected Schools in Los Angeles County, California." Unpublished Doctoral Dissertation, Northwestern University, 1957. 180 pp. (Ph.D.). (Univ. Micro. No. 58-365).

Watkins, John G. Objective Measurement of Instrumental Performance. ("Teachers College Contribution to Education, No. 860"). New York: Columbia University, Bureau of Publications, 1942. 106 pp. (Ph.D.).

Watkins, Robert H. "The Construction and Testing of a Forced Choice Scale for the Evaluation of Student Teachers in Vocal Music at the Junior High School Level." Unpublished Doctoral Dissertation, University of Illinois, 1958. 105 pp. (Ed.D.). (Univ. Micro. No. 58-1747).

Wayne, Morton. "A Study of Student Participation in Music in the Public Secondary Schools of Massachusetts." Unpublished Project Report, Teachers College, Columbia University, 1961. 463 pp. (Ed.D.).

Webber, Emily E. "Minimum Piano Requirements for Music Education Majors: A Comparative Study and Evaluation of Piano Competencies." Unpublished Doctoral Dissertation, The Florida State University, 1958. 188 pp. (Ph.D.). (Univ. Micro. No. 58-2798).

Weegar, Carlton E. "Music Teacher Certification in New York State." Unpublished Doctoral Dissertation, New York University, 1957. 397 pp. (Ed.D.). (Univ. Micro. No. 22-737).

Weidensee, Victor J. "A Study to Adapt the Instrumental Music of the Mannheim School as Suitable High School Woodwind Ensemble Music." Unpublished Doctoral Dissertation, University of Oregon, 1956. 143 pp. (Ed.D.). (Oregon Univ. Micro. No. 20-702E).

Weigand, James J. "A Comparison of the Effectiveness of Two Methods of Teaching General Music in the Junior High School." Emporia State Res. Studies, 10 (March, 1962), 5-55.

Wenaas, Sigurd B. "A Study of the Relationship Between Musical Ability and Various Intelligence, Scholastic and Personality Factors." Unpublished Master's Thesis, University of Idaho, 1940. 39 pp. (M.S.).

Wheeler, Lester R., and Viola D. Wheeler. "The Musical Ability of Mountain Children as Measured by the Seashore Tests of Musical Talent." Pedagogical Seminary and J. Genet. Psychol., 43 (December, 1933), 352-376.

Whitener, Agnes B. "A Study of the Prevailing Practices of the General Music Course in the North Carolina Secondary Schools." Unpublished Master's Thesis, Appalachian State Teachers College, 1954. 169 pp. (M.A.).

Wiebe, Gerhart D. "The Effect of Radio Plugging on Students' Opinions of Popular Songs." J. Appl. Psychol., 24 (December, 1940), 721-27.

Wikstrom, Thomas N. "The Application of Early String Literature to Heterogeneous String Classes at the College Level." Unpublished Doctoral Dissertation, The Florida State University, 1960. 183 pp. (Ed.D.). (Univ. Micro. No. 60-5509).

Wiley, Charles A. "An Experimental Study of Tachistoscopic Techniques in Teaching Rhythmic Sight-Reading in Music." Unpublished Doctoral Dissertation, University of Colorado, 1962. 265 pp. (Ed.D.). (Univ. Micro. No. 63-2029).

Willeke, Russell E. "A Survey of the Junior High School General Music Course in the Rural Schools of District Three in Northwestern Ohio." Unpublished Master's Thesis, Bowling Green State University, 1955. 67 pp. (M.S.).

Williams, Harold M. "A Study in the Prediction of Motor Rhythmic Performance of School Children." Pedagogical Seminary and J. Genet. Psychol., 43 (1933), 377-388.

Williams, Raymond E. "The Measurement and Prediction of Cooperating Teacher Effectiveness in Music Teacher Education." Unpublished Doctoral Dissertation, University of Illinois, 1958. 163 pp. (Ed.D.). (Univ. Micro. No. 58-5520).

Willman, Rudolph P. "An Experimental Investigation of the Creative Process in Music: The Transpossibility of Visual Design Stimuli to Musical Themes." Psychol. Monogr., 57:1 (1944), 1-76 (Whole No. 261).

Wilson, William C. "Some Inter-relationships of Verbal and Musical Listening Abilities in Elementary School Children." Unpublished Doctoral Dissertation, University of California at Berkeley, 1960. 90 pp. (Ed.D.). (Univ. Calif. Micro. No. CU-4713).

Woerner, Gerald H. "An Analysis of Certain Criteria of Musicianship as Recommended by the Teacher Training Curriculum Committee of the Music Educators National Conference on the Basis of the Training and Experience of Pennsylvania School Music Teachers." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1949. 498 pp. (Ed.D.).

Wolfe, Irving W. "An Analysis of the State Teachers College Education of Music Teachers and Supervisors." Unpublished Doctoral Dissertation, Northwestern University, 1936. 312 pp. (Ph.D.).

Wolner, Manuel, and W. H. Pyle. "An Experiment in Individual Training of Pitch-Deficient Children." J. Educ. Psychol., 26:8 (November, 1933), 602-608.

York, Roy, Jr. "An Experimental Study of Vocal Music Reading Using Eye Movement Photography and Voice Recording." Unpublished Doctoral Dissertation, Syracuse University, 1952. 439 pp. (Ed.D.).

Zack, Melvin L. "A Study of the Influence of Selected Socio-Cultural Characteristics on Participation in Instrumental Music." Unpublished Doctoral Dissertation, University of Kansas, 1953. 248 pp. (Ph.D.).

Zima, Barbara H. "A Comparative Study of Two Approaches to the Teaching of Required Music Classes in the Junior High School." Unpublished Master's Thesis, Northwestern University, 1956. 57 pp. (M.M.).

APPENDICES

APPENDIX A--Abstracts of Competent Research: 1930-1962

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APPENDIX A

Abstracts of Competent Research: 1930-1962

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APPENDIX A

Abstracts of Competent Research: 1930-1962

1. Amar, Wesley F. "An Investigation of Some Factors Relating to the Identification of Eighth Grade Children Possessing Musical Potential." Unpublished Doctoral Dissertation, Loyola University (Chicago), 1958. 158 pp. (Ed.D.).

The contributions of various factors to musical ability were investigated by means of an instrument which was tested for its value in identifying musical potential in a group of eighth grade students. Data were obtained from the Drake Musical Memory Test, the "artistic" and "music" scales of the Kuder Preference Record, teachers' ratings of musical ability and reading, intelligence and arithmetic advancement scores, and an experimental Music Interest and Environmental Survey. The subjects were 250 eighth grade students from seven Chicago elementary schools. Students in two additional elementary schools and a high school concert band, were used for cross validation of the Drake Test and the experimental Survey. Comparisons were made between the highest 27 percent on the Drake test and the lowest 27 percent. More than twice as many subjects in the high group had instruments in the home, played an instrument, studied music privately, hoped to be in a high school music group, and preferred to participate rather than watch in an assembly. Both groups selected well-known popular singers, failed to name music as a favorite hobby, preferred moderately styled popular music, and preferred gym, music, and art as subjects in school. In regard to activities and musical interests, the survey separated those with high and low musical aptitude as measured by the Drake test. Teachers' ratings correlated more highly with the survey scores than with the Drake scores. The correlations between intelligence and arithmetic scores and the Drake test were found to be considerably higher than those reported by Drake. (Faculty Advisor: Max D. Engelhart and J. M. Wogniak).

2. Andrews, Dorothy E. "Comparative Study of Two Methods of Developing Music Listening Ability in Elementary School Children." J. Res. Music Educ., 10:1 (Spring, 1962), 59-64.

An experiment was conducted to evaluate and compare musical values derived from a formal, traditional teaching process with those derived from an active, informal presentation. Two fifth grade music classes from one elementary school were chosen as experimental and control groups and the two groups were equated on eight relevant variables. A test battery was developed for the study, pre-tested, and administered at the beginning and end of the experimental period. The control group received traditional teacher directed training and the experimental group received largely self-initiated instruction. In both groups, listening activities were emphasized. Critical ratios were used to test observed differences in equating the groups as well as to test differences in test scores before and after the experimental method was applied. Reliability of the tests used was obtained by use of the Pearson Product Moment correlation. The subjects learned approximately the same amount of factual information from either method. Attitudes developed by the experimental group toward the values of music were significantly more positive than were those of the control group, the difference being significant at the .01 level.

3. Annett, Thomas. "State and County Supervision of Public School Music." Unpublished Doctoral Dissertation, University of Cincinnati, 1938. 185 pp. (Ed.D.).

In order to ascertain the status of the state supervisors of music and their programs, a check list was sent to and returned by all state and territory superintendents and music supervisors. From the obtained data it was found that 11 of the 53 states and territories required music instruction by law. Eight states had state supervisors of music while 18 states had some agency performing either all or part of the duties generally delegated to the state music supervisor. Seventeen state directors of education reported the need for a state supervisor while nine reported no need. Seventeen states

and territories issued courses of study in music. All music supervisors reported an interest in the promotion of music contests. Four state supervisors had duties in connection with the certification of teachers and two reported duties in teacher training. An "experimental" section was included in this study but, because of arbitrary test validation procedures, the results were inconclusive. (Faculty Advisor: Louis A. Pechstein).

4. Ardrey, Eldon A. "The In-Service Needs of Arizona Primary Classroom Teachers to Teach Music." Unpublished Doctoral Dissertation, University of Colorado, 1959. 312 pp. (Ed.D.). (Univ. Micro. No. 60-1031).

The purposes of the study were to identify strengths and weaknesses from data presented by teachers in the field, to evaluate data and recommend areas needing attention in in-service programming, and to observe activities that suggest direction for pre-service training. A rating schedule and questionnaires were pre-tested and administered to a randomly selected sample of primary teachers, stratified by county in the state of Arizona. Fifty-seven elementary music specialists were asked to evaluate the effectiveness of three teachers with whom they were working. Of the 57, 14 usable replies were received. A jury of experts rated the emphasis different kinds of teacher competencies should be given in pre-service training. The investigator made 58 observations based on personal visits to ten school districts. Data were analyzed in means, frequencies, and percentages. Teachers, supervisors, and the investigator agreed that knowledge of the child voice was among the weakest competencies observed. There were very few competencies in which the teachers used in the study were sufficiently prepared. (Faculty Advisor: Hubert H. Mills).

5. Arnspiger, Varney C. Measuring the Effectiveness of Sound Pictures as Teaching Aids. ("Teacher's College Contributions to Education, No. 565.") New York: Columbia University, Bureau of Publications, 1933. 163 pp. (Ph.D.).

An experiment was conducted on the relative effectiveness of teaching with the aid of certain educational sound motion pictures in the fields of natural science and music in grades five and seven, respectively, as contrasted to the usual methods of classroom instruction. A stratified sample of 1,425 seventh grade subjects was obtained in terms of socio-economic status, geographic location of the community, and mental ability (Pitner Rapid Survey Test, Form B). Teachers of control and experimental groups were equated on teaching ability as measured by Jacob's Rating Scale of Teaching Ability. Preliminary tests were administered to a pre-test group of c.350 subjects and weighted scores were developed. The validated tests were administered both before and after the fourteen week experimental period. For film evaluation, a check list was developed by the research staff of Erpi Picture Consultants, Inc. The Critical Ratio was used to test differences between control and experimenting groups. The sound films in this study made distinct contributions to learning. In music, the experimental group excelled the control group in average gains on non-picture test items in every unit studied. In the woodwind and the percussion units, the superiority of the experimental groups was statistically significant. The average gains made by the experimental groups in music exceeded those made by the control groups by statistically significant amounts in all groupings of high, average, and low mental ability (I.Q.) groups. (Faculty Advisor: George D. Strayer).

6. Ball, Louis O., Jr. "A Study of the Effectiveness of Three Methods of Teaching Choral Music as Evaluated through Musical Performance." Unpublished Master's Thesis, University of Tennessee, 1953. 164 pp. (M.S.).

The purpose of this study was to determine the efficiency of three methods of teaching choral music through the evaluation of musical performance. From a group of 15 arbitrarily selected choral compositions a panel of experts selected nine, three each, in easy, medium, and difficult categories. Random selection was made to determine which method was to be used with the individual compositions. One composition from each category of difficulty received traditional treatment. In a like manner the remaining six compositions were assigned to either "rhythmic method" approach or "mood method" approach.

Each method was allotted 1½ hrs. during the three day experiment. On the fourth day, recordings were made of all nine compositions which were judged by a panel of choral directors for effectiveness of learning. There appeared to be no significant difference in the effectiveness of the three methods used in this study. The over-all difficulty of the composition did not appear to have any effect on the efficiency of any one particular method of teaching choral music. (Faculty Advisor: Erwin H. Schneider).

7. Banse, Andrew M. "Music Supervision in the Elementary Schools of New York State." Unpublished Doctoral Dissertation, New York University, 1951. 166 pp. (Ed.D.). (Univ. Micro No. 3440).

In an effort to determine the status and practices of music supervision in the elementary schools from small school systems (based on enrollment) of New York State, a questionnaire was developed from an inquiry form sent to all school systems in New York State having an enrollment within the range of 200 to 1,550 students. The questionnaire was tested and refined twice before being sent to the 154 school systems indicating that a music supervisor was included on the staff. Seventy-seven questionnaires were returned. Conclusions based on the data obtained were as follows: music supervision was not universal in small school systems of New York State, the professional training and teaching experience of the music specialists who participated in the study were not the determinants of the presence or absence of music supervision in some elementary schools, and the lack of undergraduate preparation of grade teachers in music seemed to be an important factor hindering the use of music supervisory practices in some elementary schools of New York State. (Faculty Advisor: Bjornor Bergethon).

8. Barr, Frank W. "Current Practices in Music Education in the Elementary Schools of Northeastern Ohio." Unpublished Doctoral Dissertation, Western Reserve University, 1956. 351 pp. (Ph.D.).

Current practices in music education in the elementary schools of Northeastern Ohio were ascertained by the use of a questionnaire which was based on statements from authorities in music education and was sent to a stratified sample of 69 schools in Northeastern Ohio. It was found that music specialists were responsible for the direction of the music program in the entire school system as follows: city school system, 39 of 45; exempted village systems, nine of ten; and county systems, three of fourteen. Three schools did not employ a music specialist. Elementary classroom teachers taught 57 percent of the music in the schools studied. The music specialist was consulted in about three percent of the schools in hiring teachers. About four percent of the supervisors rated teachers for placement, retention, or promotion. Forty-three percent of the schools had a locally adopted course of study in music of which approximately 37 percent were written by the music specialist. Music classes were regularly scheduled in about 93 percent of the schools studied. (Faculty Advisor: David P. Harry, Jr.).

9. Barth, George W. "Some Personality and Temperament Characteristics of Selected School Music Teachers." Unpublished Doctoral Dissertation, University of Southern California, 1961. 304 pp. (Ed.D.). (Univ. Micro. No. 61-2521).

The purpose of the study was to determine whether there was homogeniety of characteristics of personality and temperament among selected school music teachers, and to determine, whether they differed atypically in these respects from the adult general population. Criteria for "outstanding teachers" were established. Two samples were obtained: (1) teachers recognized as outstanding by a jury of 22 judges; (2) general, average teachers who had not been selected. A total of 316 teachers were selected for the study. The test battery, consisting of Cattell's 16 PF, the Thurstone Temperament Schedule, and a personal data sheet, was administered individually by the investigator. Data were analyzed by use of correlation coefficients, F test, chi square, and the critical ratio. Comparisons of temperament scores were made between teachers who indicated they were highly satisfied with their jobs and those teachers who were not highly satisfied as music teachers.

Measurable differences in personality and temperament trait characteristics were identified and were related to teaching effectiveness as defined by the investigator. Both the normative and the correlational statistical analyses procedures employed indicated the two groups mentioned above differed significantly on six factors of Cattell's 16 PE and on three factors of the Thurstone Temperament Schedule. The selected (outstanding) teachers were higher than the unselected (random) teachers in: general mental ability, perseverence and persistence, self-sufficiency, permissiveness, confidence, less tension and less anxiety, more active, leadership qualities, and emotional stability. Findings on the normative and on the correlational statistics tended to confirm and reinforce each other. (Faculty Advisor: Ralph E. Rush).

10. Batcheller, John M. "An Appraisal of Music Education in the White Elementary Schools in South Carolina." Unpublished Doctoral Dissertation, University of South Carolina, 1956. 185 pp. (Ph.D.). (Univ. Micro. No. 56-3948).

The music programs of the elementary white schools in South Carolina were evaluated in terms of current opinions and writings in the field of music education. The evaluative criteria were obtained as follows: personal interviews were conducted with various outstanding persons in music education, the literature was analyzed, and a questionnaire was sent to the 48 state superintendents in the U.S., 47 being returned. For other data a questionnaire was sent to all principals of white elementary schools in South Carolina (N=552). The data were analyzed by a comparison of raw numbers. The survey revealed that South Carolina lacked state leadership and supervision in elementary music education. Most teachers were inadequately prepared and the schools did not have adequate equipment to teach music in the classroom. For example, only nine percent of the white public elementary classrooms had pianos. Most curricula were not organized to incorporate music in the elementary educational program. The principals were unaware of the standards and structures of adequate, well-balanced music programs in their schools. Most of the schools did engage in some type of public music performances each year. (Faculty Advisor: Newton Edwards).

11. Baumann, Victor H. "Socio-economic Status and the Music Preferences of Teen-agers." Unpublished Doctoral Dissertation, University of Southern California, 1958. 291 pp. (Ed.D.). (Univ. Micro. No. 737-B).

The purposes of the study were: (1) to develop a device for sampling music preferences; (2) to discover what music young people like and how much, or how little, music preferences vary in teen-agers; (3) to verify or contradict results of previous studies of music preference, and to determine if children of different communities actually live in different worlds of music. Students in grades seven through fourteen in Phoenix, Arizona, and Cumberland, Maryland, were subjects. Music Preference Inventory, Short Social Status Inventory, and Personal Information Inventory were administered. The study indicated that there were statistically significant differences in the music preferences of high and low socio-economic groups for some kinds of music. Primarily it was a difference in the degree of preference and not of one group accepting a kind of music rejected by the other. It could not be generalized that socio-economic status causes enough difference between pupils to warrant variations of presentations to general music classes which vary according to the general socio-economic class. Mass media condition preferences; and if they have "leveled" taste, it seems to have been a higher level. Preferred means of listening to music is the radio, followed by the phonograph and then television. Music classes and assemblies ranked very low. Much variation in music preference within the "teen" age span was evidenced. In general, the results of the Music Preference Inventory verified results of other studies. Whatever the causes, popular-commercial music selections proved most acceptable to all teen-agers, without difference according to age, socio-economic class, or sex. (Faculty Advisor: Ralph E. Rush).

12. Becker, William R. "The Effects of Overlearning, Initial Learning Ability and Review Upon the Music Memory of Junior High School Cornet and Trumpet Players." Unpublished Doctoral Dissertation, The State University of Iowa, 1962. 93 pp. (Ph.D.). (Univ.

Micro. No. 62-4963).

In an investigation of the effects of overlearning, initial learning ability, and relearning-review upon the music retention scores of 84 junior high school cornet and trumpet players, the investigator divided the subjects into three groups equally balanced as to playing ability. One group received no overlearning, another group received about 50 percent overlearning, and the third group received 100 percent overlearning. After two weeks and again at four weeks each subject relearned the same exercise. Intelligence test scores were correlated with initial learning trials and data on effects of overlearning, initial learning ability, and temporal position were tested by analysis of variance. No evidence was found to support the notion that overlearning of music material facilitates its recall at a later date; this was true for both the two and the four week period. Effects of overlearning were the same for subjects of above average, average, and below average ability although the subject's ability did affect the ease of relearning. Relearning scores after four weeks were significantly improved by the review which occurred at the two week relearning period. Review improved the below average subjects significantly more than it did for the average and the above average subjects. (Faculty Advisor: Edwin Gordon).

13. Best, Clarence J. "Vocal and Instrumental Music Rooms and Equipment in Secondary Schools." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1945. 380 pp. (Ph.D.).

An investigation was made into the considerations for housing and equipping the music department which are common to and essential in a total program of education. The data was obtained: (1) through a questionnaire which was sent to music educators and school architects; (2) from research findings in acoustics; and (3) from architectural literature. Recommendations were developed from the questionnaire results and from a collation of research in acoustics and architectural design. (Faculty Advisor: Irving Wolfe).

14. Bliss, Raymond B. "A Survey of the Courses of Study for Music in Three-Year City Senior High Schools of Ohio." Unpublished Master's Thesis, University of Texas, 1960. 74 pp. (M.M.).

An examination was made of the courses of study for music in the 59 city schools listed as three-year senior high schools in the 1959-1960 Ohio Educational Directory. Letters of inquiry were sent to the schools requesting a course of study for music. Replies were received from 51 schools, 13 of which were able to provide courses of study for the investigation. The data were organized and analyzed in terms of "stated aims and objectives" and "variety and scope of music courses offered," as described by Leonard and House. Twenty-four schools (47.06 percent) did not use a course of study. Of the objectives stated for the large choral groups, a greater number involved mental and motor skills than other types of learning; while for large instrumental groups, a greater number involved attitudes. Of the objectives stated for the academic music courses, a greater number involved knowledge and understanding than other types of learning. Academic music courses were reported by 75 percent of the schools, while the emphasis was on harmony and theory courses rather than broad, exploratory courses of history and appreciation. In most courses of study, aims and objectives for the advanced choral groups were more numerous and more explicit than those stated for the "training" groups. Considering the objectives stated in the available courses of study, it was concluded that marching band contributed little to the musical growth of participant students in terms of intrinsic musical value. (Faculty Advisor: Charlotte DuBois).

15. Blyler, Dorothea M. "The Song Choices of Children in the Elementary School." Unpublished Doctoral Dissertation, University of Illinois, 1957. 359 pp. (Ed.D.). (Univ. Micro. No. 58-4368).

A total of 9007 elementary school children in nine states submitted (by questionnaire) a list of songs that they both liked and disliked. All respondents were from schools using either The American Singer or the New Music Horizon series. Characteristics of the preferred songs were compared to discover any similarities, the same procedure being employed for the disliked songs. It was found that the types of music the children learned outside of school and liked to sing were similar for all grades, jazz being ranked first. No sex differences were apparent in song preferences. Characteristics of preferred songs included strong melodic movement, well defined cadences ending on tonic, major mode, primary chordal background, and dynamic variation. Disliked songs possessed words not in keeping with believed interests of the various age groups, a static melody, a frequent use of "do" and tonic triad, an imperfect authentic cadence, ending tones other than "do", and accompaniments which repeated the melody. The length of the song appeared to have little or no bearing on the choices, (Faculty Advisor: Charles Leonhard).

16. Bodie, Merry D. "A Study of Seventh Grade General Music Listening Experiences." Unpublished Master's Thesis, University of Texas, 1958. 70 pp. (M.M.).

A comparison was made of the results of thematic music memory tests taken from listening experiences, with and without the use of program notes. Twenty musical themes were played for the students to determine if they had heard them before. Four separate classes (N=100) participated in the experiment with classes serving alternately as control and experimental groups. At intervals of approximately seven class days, two selections from the original pool were used in a listening program. Control groups were given presentations without program notes while the experimental groups were given presentations with program notes, discussion and hearing motives played on the piano. The original twenty themes were played again. Students were asked to identify them. First and second test results were compared. Questionnaires were administered to determine students' preferences for methods. The students' ability to recognize musical themes presented with or without program notes was nearly equal. The largest total number of compositions identified occurred in students having the highest intelligence, and decreased as the level of intelligence dropped. The compositions presented without program notes were identified more frequently by students in the I.Q. range of 70 to 109. The largest total of compositions identified was found in students with previous private and public school music study. Boys scored slightly higher in identification of compositions than girls. Program notes exceeded other factors as an aid to musical memory, while melody was indicated by a greater number of students as a preference factor. A majority of students preferred program notes. (Faculty Advisor: Archie Jones).

17. Borg, Robert L. "An Analysis of Music Teacher Education Programs in a Select Group of Midwestern Universities and Colleges." Unpublished Doctoral Dissertation, The State University of Iowa, 1959. 180 pp. (Ph.D.). (Univ. Micro. No. 59-5701).

An analysis was made of the basic requirements minimum standards, and course offerings and credits for undergraduate music majors preparing to teach music in the public schools and the findings compared to the "Standards for the Evaluation of the College Curriculum for the Training of the School Music Teacher." A total of 24 universities, liberal arts schools and teachers colleges were chosen from the midwestern states. An analysis was made of the 1958-1959 catalogues of each institution and a personal visit was made to each institution where interviews were held with the head of the music and the music education departments, music methods teachers, and at least three music education students who had received some student teaching experience. Although heads of music departments agreed that teacher training institutions should conform to minimum M.E.N.C. standards, data revealed that not all of the institutions surveyed did meet the minimum standards, especially in the areas of "Musical Performance" and "Professional Education." The administrators in the teacher's colleges indicated that the requirements in general education overbalanced those in music and professional education. Minimum music entrance requirements to the teacher training program varied greatly. Eighty percent of the music majors in departments and schools of music were in

the teacher training programs, 85 percent electing this program in their freshman year. (Faculty Advisor: Neal E. Glenn).

18. Boyle, John D. "A Study of Current Practices in General Music in the Senior High Schools of Kansas, Missouri, Nebraska, and Oklahoma." Unpublished Master's Thesis, University of Kansas, 1960. 81 pp. (M.M.E.).

A survey was made concerning current practices in the general music course in the senior high schools of some selected midwestern states. A preliminary survey was conducted to determine which senior high schools, of more than 100 students, had a general music program, and to determine the willingness of these schools to cooperate in the study. Sixty-four percent of the schools responded to this preliminary survey. The questionnaire was sent to the 78 schools. Thirty-five of the 47 returned questionnaires were usable. The data were compiled in percentages. About one-fifth of the high schools (responding to the preliminary survey) offered a course in general music. The specific objectives of the course varied greatly, but the overall objective was to promote a better understanding, knowledge, and appreciation of music. In most of the schools the class met five full-length class periods per week. More than one-half of the teachers organized the material around interest centers. A large majority of the schools offered the course as an elective and for credit (½ to 1 credit per semester). More than three-fourths of the teachers thought that their college training prepared them adequately for teaching such a course. The most successful activities were field trips, the study of jazz and popular music, and the writing of original compositions. (Faculty Advisor: Marcus E. Hahn).

19. Briggs, Robert L. "The Development and Standardization of an Achievement Test for Use in Music Education at the Graduate Level." Unpublished Doctoral Dissertation, University of Kansas, 1951. 202 pp. (Ph.D.).

An achievement test was developed for use in the field of music education at the graduate level as a device in guidance and the prediction of success. Nine fields from three general areas were included as follows: (1) Educational Administration and Curriculum (2) General Psychology, (3) History of Education, (4) Music Education, (5) General Psychology, (6) Educational Psychology and Measurements, (7) Psychology of Music, (8) History of Music, (9) Theory of Music, Instrumentation and Conducting. The first form of the test (Form A) contained 300 items for the three general areas of Education, Psychology and music. The subjects were 60 students at 5 major universities. "Form A validity was estimated as r=.345±.0114 to .51±.0905 using total score, teachers ratings, and students' grades." A split-half method of analysis for reliability yielded a correlation of .934±.0154. After items were analyzed for potency, 50 were eliminated leaving a test (Form B) of 250 multiple choice questions with five alternatives for answers. Form B was administered to 200 students in 13 colleges and universities. The correlation between total score and grade point average was .256±.0317. Between total score and teacher rating it was .57±.0052. The reliability as measured by the split-half method was an r=.944±.0049. The items on Form B were analyzed for potency using 185 randomly selected papers. The upper 27 percent and the lower 27 percent were used to calculate an index of discrimination and degree of difficulty. The analysis revealed that 196 items of the 200 item Form B were usable with no more than 90 percent and no less than 20 percent of the group able to answer correctly. (Faculty Advisor: E. Thayer Gaston).

20. Broquist, Oliver H. "A Survey of the Attitudes of 2594 Wisconsin Elementary School Pupils Toward Their Learning Experiences in Music." Unpublished Doctoral Dissertation, University of Wisconsin, 1961. 304 pp. (Ph.D.). (Univ. Micro. No. 61-5897).

A survey was made of elementary school pupils from grades two through six to find what attitudes they had toward their public school learning experiences in music. A forced choice check sheet was designed and checked for reliability in a test-retest situation. The investigator administered all tests personally to the 2594 subjects from twenty schools in southern Wisconsin; ten of the schools had music specialists and in

ten schools the classroom teacher taught music. Both sexes showed a decline in favorable attitudes toward music as grade level increased. More girls than boys were found to have a positive attitude at the second grade level. Musical play activities were welcomed by the subjects more than were music reading and writing. The music specialist and the classroom teacher presented similar activities and showed little differences in results of their teaching as far as attitudes toward music were concerned. (Faculty Advisor: Robert G. Petzold).

21. Brown, Robert D. "A Study Concerning the Major Weaknesses of Music Teachers in the Secondary Schools of Kansas." Unpublished Master's Thesis, University of Kansas, 1955. 43 pp. (M.M.E.).

A survey was made to determine: (1) the major weaknesses of music teachers in the secondary schools of Kansas, (2) if the weaknesses designated by school administrators differ from those indicated by music teachers, (3) if the weaknesses varied in accordance with the population size of schools and communities, and (4) if the weaknesses of music teachers distinguished them from teachers in other fields. A questionnaire was constructed and administered to six graduate students to determine comprehensibility. The questionnaire, based on music teacher weaknesses as discussed in the music education literature, was sent to a stratified random sample of 150 school administrators and 150 music teachers in Kansas, 108 being returned by the administrators and 85 by the music teachers. The data were analyzed in frequencies and percentages. The lack of sufficient discipline control appeared to be the most common weakness. More than one-half of the subjects indicated that teaching skill, leadership, cooperation, emotional stability, tactfulness, and academic knowledge were common weaknesses. Seven of the highest percentages of frequencies were weaknesses not connected with musical training. Generally, school administrators and music teachers agreed on the common weaknesses of music teachers. The greatest difference in opinions between the two groups occurred in regard to the musical aspects of the professional competencies. Little difference in opinions was found between large and small school teachers and administrators. (Faculty Advisor: Gerald M. Carney).

22. Buebendorf, Francis X., Jr. "A Study and Special Treatment of Classic Symphonies for the School Orchestra." Unpublished Project Report, Teachers College, Columbia University, 1947. 207 pp. (Ed.D.).

The purposes of this project were to analyze in detail 25 arbitrarily selected symphonies of the classic period (1760-1800) which are adaptable for use by the school orchestra of today and to adapt the Symphony in D Major, Op. 183, No. 1, by Carl Phillip Emanuel Bach for the school symphony. A general background of the development of the symphony and the symphonic form from Sammartini through Beethoven was discussed. Previous revisions and editions were criticized and criteria for developing an edition were established in terms of the capabilities of school student musicians. The criteria were obtained from published sources and interviews with music educators. In terms of those criteria, a full orchestral score of the C.P.E. Bach Symphony was reproduced with alterations and revisions indicated by smaller manuscript symbols. (The score is bound separately from the text.) Personnel and facilities needed to perform the edited symphony were also stated. (Faculty Advisor: James L. Mursell).

23. Buegel, Hermann F., and Patricia S. Billing. "Inventoried Interests of Participants in Music Groups." J. Educ. Res., 46:1 (October, 1952), 141-146.

Music is frequently the only extra-curricular course offered in small high schools. The purpose of the study was to determine whether or not music students in these schools have a greater interest in music than do the non-music students from the same schools. The Kuder Preference Record, Form BB, was administered to 354 music students and 96 non-music students from seven high schools and one "university madrigal group." The upper and lower quartiles of scores obtained from the Kuder Preference Record were compared in terms of percentages. Among all subjects, a rather consistent musical interest

seemed to prevail. Of students participating in musical activities, the greatest percentage of both males and females showed a definite interest in music. About one-third of the females and one-fourth of the males in the non-music groups scored above the 75th percentile in musical interest. Dislike of music was not apparent in either music or non-music groups although some variation among schools was indicated. There appeared to be very little difference between sexes in both music and non-music groups.

24. Bulgin, Lansing W. "Music Education Curricula in Selected Non-Accredited Liberal Arts Colleges." Unpublished Doctoral Dissertation, Indiana University, 1957. 274 pp. (Ph.D.). (Univ. Micro. No. 57-4830).

A survey and evaluations were made of the programs followed by selected non-accredited liberal arts colleges in the preparation of public school music teachers. The entire population (N=42) of colleges was studied, meeting the following criteria: coeducational, independently controlled, liberal arts college, non-accredited, four-year curriculum in music education leading to the baccalaureate degree. Data were obtained from the catalogues of all 42 colleges, from a questionnaire to which 27 colleges responded, and from personal interviews with college music educators in 16 of the 27 colleges. Programs were evaluated by the use of relevant criteria published by N.A.S.M. and A.A.C.T.E. Admission selection in the colleges was based generally on the student's admission to the college rather than on his admission to the teacher education curriculum. Divisions of study in which the means fell below the N.A.S.M. standards were in music, while the means which exceeded the standard were primarily in non-music studies. Elective studies were most commonly made in applied music while professional education was elected least. The colleges studied (with few exceptions) followed a policy of post-entrance selection of music education students. Approximately one-half of the colleges required a senior recital, while 87 percent required a secondary medium of performance, usually piano. No college met the curricular requirements of the N.A.S.M. in terms of content and credit-hours for all five divisions of the music education curriculum. Omissions in terms of these criteria were in the following areas: general education, music theory and conducting, instrumental techniques, specific areas within the professional sequence, and the assignment to student teaching. (Faculty Advisor: Thurber H. Madison).

25. Burkhalter, N. Laurence. "Establishing Criteria for the Evaluation of the Applied Major Area of Instruction for the Bachelor's Degree in Music Education." Unpublished Doctoral Dissertation, The Ohio State University, 1961. 235 pp. (Ph.D.). (Univ. Micro. No. 62-749).

A survey was made to define and to establish acceptable criteria which would indicate the appropriate skill in the major performance area for music education students. After a review of pertinent literature and standards proposed by various professional organizations, a tentative list of criteria was constructed. The source of each statement of criteria was also listed. The questionnaire was submitted to a group of experts for revision purposes. It then was submitted to the heads of each school of music listed in the NASM list of 1959, and all music supervisors in the nation in cities of 50,000 or greater populations. The department heads were requested to distribute one copy of the questionnaire to each of the following: a teacher of applied music and a teacher of music education. Of 874 questionnaires sent 332 were returned. The data were analyzed largely in percentages and means. There was much disagreement among the respondents in the areas of "Proficiency Required for Graduation" and "Proficiency Required for College Entrance." After analyzing mean scores of all the respondents reactions, it was determined that 19 of the criteria used in the questionnaire were without need of revision. In each of the criteria accepted by the writer the group mean rank was not below 2.8 of a possible five points. Criteria used in the questionnaire which were not acceptable to the respondents were found in the areas of performing repertoire, transposition on major instrument, memorization, performing proficiency, and reading ability. (Faculty Advisor: William B. McBride).

26. Burmeister, Clifton A. "A Study of Community Attitudes toward Music Education in the Public Schools of Selected Communities in Missouri." Unpublished Doctoral Dissertation, University of Kansas, 1953. 217 pp. (Ph.D.).

A survey of adult and pupil attitudes toward school music was made in six Missouri communities which were selected from a population of 79 communities. The schools in the population were stratified according to size. A jury of eight music educators who were familiar with the area selected the six school communities in terms of community and school "typicalness" as well as by criteria supplied by the investigator. Questionnaires were administered to adult residents and high school students (randomly selected) in each of the six schools. The first questionnaire, unstructured opinions within categories, was followed by the administration of a second, structured questionnaire which was given to a second, randomly selected sample in each community. It was concluded that music education should continue to strive to provide maximum opportunities for participation. The quality of school performance did not affect opinions regarding opportunity for participation. Music education promoted the aquisition of musical skills, but this was not the most important aspect of the program in the opinion of the respondents who indicated that there was a need for more emphasis on teaching an appreciation of "good music." The public tended to evaluate a music teacher in terms of general qualifications and characteristics rather than specific skills and attainments, There was a need for increased emphasis upon general music at all levels. The public proved to be a relatively homogenous group as far as attitudes toward music education were concerned. (Faculty Advisor: E. Thayer Gaston).

27. Burns, Samuel T. Harmonic Skills Used by Selected High School Choral Leaders. ("Teacher's College Contributions to Education, No. 905.") New York: Columbia University, Bureau of Publications, 1945. 121 pp.

The ways knowledge of harmony and the skills involving harmony serve the high school choral teacher in the teaching situation was investigated by a check list which was submitted to 1,056 choral directors with 624 responding. The sample was selected on the basis of recommendations by authorities, high ratings in contests, and prominence in choral activities. By a percentage analysis of the replies, activities involving harmony were placed into three categories of usefulness. The most frequently used method of studying harmony of a composition before the rehearsal was its performance on the piano. Silent study of the score ranked second. Harmonic skills used (ranked according to frequency of use) most often were: (1) making sure that the chords rendered by the choral group are the same as those written in the score, (2) transposing from the written key, (3) altering the score, and (4) making up accompaniments. Composing was reported by 27.6 percent of respondents, while 45.5 percent reported that they arranged music. A majority reported that they limited such activities to three compositions per year. When choosing music for choral use, harmonic aspects were reported as being more important than rhythm or melody. Respondents reported the following methods in selecting music, and in the following order: (1) reading silently, (2) playing on the piano. It further was concluded that even though transposing was indicated as the second most widely used harmonic skill, knowledge of harmony and skill involving harmony do not function importantly in the activity. (Faculty Advisor: James L. Mursell).

28. Busse, Bernard W. "An Experiment in the Use of Recordings in the Teaching of Elementary Grade Vocal Music." Unpublished Doctoral Dissertation, Northwestern University, 1952. 336 pp. (Ph.D.).

An investigation was made into the use of recordings of song book materials as an aid to the teaching of grade school vocal music. Two groups (grades two through five) were equated on socio-economic aspects, physical measurements, and attitudes toward classroom procedures and toward music. They were also equated on teacher variables including length of experience, musical training, attitudes toward experimentation and music teaching and teacher effectiveness. Control groups in each grade used procedures advocated by their textbook series. The experimental groups were taught by use of recordings supplied with the textbook series. Groups which were taught rote singing

materials entirely by the use of recordings appeared to learn as well as groups which were taught rote singing materials by other means. When technical problems presented by the rote songs became more advanced than the teachers were capable of teaching, the experimental groups excelled. At the grade levels where the acquisition of reading skills was the major effort, the control groups excelled. The rates of learning were significantly greater for the experimental groups. The only significant improvements in music achievement as measured by the Knuth tests were made by only two of the control groups. In the learning of rote materials the groups which used recordings secured consistently better performance ratings in the time-rhythm area than they did in the pitch and general effect areas. Children expressed a preference for the recorded voices of men and children. (Faculty Advisor: John W. Beattie).

29. Calder, Robert W. "Factors Influencing Male Music Education Graduates of Certain Pennsylvania Institutions of Higher Education to Leave or Not Enter the Profession." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1962. 181 pp. (Ed.D.). (Univ. Micro. No. 63-3992).

A survey was made of all of the male music education graduates of nine Pennsylvania institutions of higher education (1950-59) for the purpose of determining the causal factors for their leaving the profession of music education. This yielded a sample of 119 teachers who had left the profession and 88 graduates who had not entered. These subjects were sent a questionnaire which was pre-tested and revised. Response consistency was determined through partial readministration of the instrument and through interviews with 15 of the original respondents. A primary reason male music educators left or did not enter the profession was the acceptance of another position which offered higher salary, better working conditions, or more prestige. Two closely related factors which were considered highly important were the limited opportunities for advancement in public school music teaching, the unsatisfactory maximum salary potential, and the unsatisfactory initial teaching salary. Five important factors were related to problems with school administrators. Three other factors were the musical immaturity of public school students, a poor attitude toward music by the students, and a dissatisfaction on the part of the teacher with the level and/or quality of music. In comparing instrumental majors, vocal majors, and majors in "both", majors in "both" were significantly more dissatisfied. In comparing teachers of all grades and secondary teachers, secondary teachers were significantly more dissatisfied. (Faculty Advisor: Frances Andrews).

30. Campbell, W. Paul. "A Study of District and All-State Music Festivals in Pennsylvania with Implications for the Pennsylvania Music Educators Association." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1955. 238 pp. (Ed.D.).

The study was designed to determine whether or not the Pennsylvania All-State and District Festivals were providing the musical, educational, social, and aesthetic experiences stated in the aims and objectives of the Pennsylvania Music Educators Association (P.M.E.A.) as viewed by ex-student participants, principals, and music teachers. A questionnaire was constructed and refined three times before being submitted to the subjects. The questionnaires were sent to all past student participants of the years 1947 and 1954 as well as to administrators and teachers whose students participated during 1954. Of 2,042 questionnaires sent 1,054 were returned. Critical ratios were used to test for significant differences between high and low responses and chi square to test observed differences between responses categorized by school classification. No general agreement existed concerning the procedures and administration of the festivals. There was no significant difference between the responses from schools of different sizes. A high degree of agreement was found among all respondents indicating that the music festivals were perceived to be accomplishing the stated aims and objectives of P.M.E.A. (Faculty Advisor: Hummel Fishburn).

31. Carney, Gerald M. "The Music Program in High Schools Having an Enrollment of Less than 150 Students." Univ. Kansas Bull. Educ., 13:3 (1959), 103-107.

A questionnaire was sent to each of 147 Kansas high schools during the school year 1957-1958 in order to determine the status of music in schools having an enrollment of less than 150 students. One hundred twelve questionnaires were returned. All data were collected during the 1957-1958 school year and were stated in frequencies and percentages. Music courses offered for credit by at least 50 percent of the schools surveyed, in order of frequency were as follows: band, boys' glee club, girls' glee club, and chorus. Ensembles, both instrumental and vocal, were found in 52 percent of the schools but were offered for credit in only 35 percent. Fourteen percent of the schools offered general music. Three schools did not offer any music.

32. Cassie, Lillian J. "An Evaluation of Opportunities in Music Education in the Preparation of Elementary School Vocal Music Teachers at Wayne State University." Unpublished Doctoral Dissertation, Wayne State University, 1959. 294 pp. (Ed.D.). (Univ. Micro. No. 59-4699).

The purpose of the study was to evaluate the existing vocal music education program at Wayne State University in order to determine its adequacy in light of the need for its graduates. A check list was sent to superintendents of 93 school districts in seven counties of Michigan to secure information pertaining to the teaching of vocal music in the elementary schools. A questionnaire then was based on the objectives from the superintendents check list and professional literature, and was given as a pre-test to undergraduate music education students. The revised questionnaire was sent to 20 student teachers and 63 graduates from the Wayne State Vocal Music Education program. The data were analyzed in frequencies and percentages. It was concluded that adequate opportunities were provided for developing sight singing, rhythmic, melodic, and harmonic dictation, musicianship, choral performance abilities and technical aspects of voice and singing. Inadequate areas in teacher preparation were: improvising, modulating, and transposing at the piano, arranging and writing choral music, knowledge of orchestral instruments, score reading ability, and eurhythmics. The following areas were found to be inadequate in meeting accepted standards: opportunities for learning experiences related to teacher of music appreciation and creative activities, knowledges of philosophies and trends in music education, a knowledge of more than one teaching method, learning to use rhythm, harmony, and melody instruments, supervisory practices, and observation prior to student teaching. The most neglected areas in student teaching were the use of instruments in teaching and opportunities to correlate music with other curriculum areas. (Faculty Advisor: Lynn Nicholas).

33. Chin, Shuyung. Relationship Between Certain High School Subjects and Out-of-School Activities of the Students. New York: Columbia University, 1934. 104 pp. (Ph.D.).

A questionnaire was devised and distributed to 1700 high school students in two high schools (one in New York City and one in New Jersey) for the purpose of finding what relationships may exist between the subjects high school students study and their out-of-school activities. There were 504 respondents to music items. Comparisons were made between three groups having differing quantities of music experience: (1) three to four semesters, (2) one to two semesters, (3) no music. Items used for comparison were a) reading music literature, b) attending musical performances, c) participating in musical performances, d) playing musical instruments, e) listening to the radio or phonograph. Subjects with one or two semesters or no music did not differ significantly on any of the items. The differences between these two groups and the more experienced group ranged from twice as much out-of-school activity to one-third more on items a), b), c), and d). The groups were almost equal on item e) with the musically experienced at 93 percent and the no music experience at 90 percent. More girls than boys tended to be involved in music. No relationship was found between out-of-school activities and age, intelligence, available leisure time, or home environment. A strong relationship

existed with a student's place in the upper quartile in music grades, preference for music in school, the quantity of musical activity in school, and taking private music lessons. (Faculty Advisor: P. M. Symonds).

34. Christy, Leo J. "A Study of the Relationships Between Musicality, Intelligence, and Achievement." Unpublished Doctoral Dissertation, Indiana University, 1956. 165 pp. (Ph.D.). (Univ. Micro. No. 57-592).

The 103 students who had matriculated as freshmen from 1948 to 1952 at Indiana University, School of Music, were used as subjects in a study of relationships between musicality, intelligence, achievement, and certain other subsidiary variables of undergraduate music students. The data were collected from the registrar's office, scores on a psychometric battery, and scores on a music aptitude battery consisting of three standardized tests. They were analyzed after the subjects had been grouped according to the music degree curriculum. Comparisons were made between subjects in the four degree curricula and in performance medium. The variable of age was positively correlated with success on the music aptitude battery, the older students making fewer errors. The variable of sex showed a significant relationship only with the Madison Tonal Imagery Test, on which the females averaged about three to five errors less than the males. The variable of degree curriculum showed a significant relationship only with the Drake Musical Memory Test, on which the B.M. graduates averaged approximately 3.5 errors less than the B.M.E. graduates. The variables of intelligence test scores showed low but positive relationships with scores made on the music test battery. There was no significant difference between the graduates and the drop-outs of this study with regard to the distribution within groups of the sexes, the degree curricula, or the performance media among the B.M and B.M.E. students. Achievement in music study could not be predicted on the basis of intelligence test scores or music aptitude test scores. (Faculty Advisor: Jack M. Watson).

35. Cockrum, James E. "A Comparative Study of Selected Educational Music Film Evaluations as Prepared by Selected Groups." Unpublished Doctoral Dissertation, Indian University, 1955. 263 pp. (Ed.D.). (Univ. Micro. No. 55-977).

The purposes of the study were to identify the similarities and differences in evaluations of music films made by five selected groups, to determine the degree of unanimity within and between the groups, and to draw conclusions concerning the quality of educational music films and the merit of the evaluation forms developed. Five groups of 24 evaluators were selected from (1) college music educators, (2) college music specialists, (3) secondary school music teachers, (4) secondary school music students, (5) secondary school non-music students. The investigator screened 124 films, selecting nine according to eleven criteria. Evaluation forms based on the criteria were constructed. Also constructed were a personal data sheet for adults, a student music film questionnaire, and a personal data form for secondary students. The nine films were previewed and the forms used by graduate students in music education. Three final films were then chosen and the forms revised. A pilot study was made using four university music faculty members and a group of secondary students. The final version of the form was administered to subjects in eight colleges and thirteen high schools. Although there was disagreement on all items within groups, the distribution of disagreement was similar between groups. High school subjects revealed a different orientation to the films than did teachers concerning suggested revisions. Music educators and non-music students were more negatively critical while music students and high school instructors gave the highest overall ratings. There was no generalizable agreement concerning the quality of the films within or between groups. Specialized and detailed evaluation forms were concluded to be more satisfactory than brief general forms. (Faculty Advisor: Carolyn Guss).

36. Coe, Robert M. "A Comparative Analysis of the Music Programs of Selected Teachers Colleges, Liberal Arts Colleges, and State Universities, and the Rating of These Programs by Public School Music Teachers." Unpublished Doctoral Dissertation, Colorado

State College, 1961. 175 pp. (Ed.D.). (Univ. Micro. No. 61-6887).

The curriculum content for the education of public school music teachers was examined in selected teachers colleges, liberal arts colleges, and state universities in order to compare viewpoints held by public school music teachers regarding their professional preparation and their professional needs, and to compare curricular offerings in the three institution types. Thirty institutions (ten of each type) were arbitrarily selected from the central United States. Questionnaires were sent to each institution requesting information regarding curricular requirements. Statements were obtained regarding professional needs from a large group of music teachers. A rating sheet of fifty-one statements was compiled. The Q-sort technique of forced-choice ratings was used. The subjects were chosen such that an equal number were graduates from each of the institution types being studied. Comparisons were made on a frequency basis between the observed rankings and institution-type from which the subjects had graduated. There was little difference in required semester hours for graduation in the three institution types. The majority of the faculty was listed in the applied areas in all three types of institutions. The student-faculty ratios were as follows: state universities 8:1, state colleges 7:1, liberal arts colleges 4:1. Findings from the Q sort revealed that two main ideas were prominently favored in the rankings: (1) that the teacher possess the personable qualities and leadership ability, and (2) a need for more methodology in the training of the music teacher. Music education was the most common major in music in all institutions. Those institutions offering the Bachelor of Music degree placed more emphasis upon music content courses than upon teacher training. (Faculty Advisor: E. E. Mohr).

37. Colbert, John K. "The Teaching Load Related Activities of Music Teachers in Indiana Public Schools, 1953-1954." Unpublished Project Report, Teachers College, Columbia University, 1956. 140 pp. (Ed.D.).

The purposes of this study were to report, compare (where possible), and discuss data concerning the teaching load and related activities as reported by 529 music teachers in Indiana public schools for the school year, 1953-1954. A questionnaire was constructed and sent to the 1284 music teachers as listed in the Indiana School Music Teachers' Directory, 1953-1954, from which 529 usable questionnaires were returned. The findings were expressed in percentages and were compared with studies by and recommendations of the N.E.A. and the North Central Association of Colleges and Secondary Schools (N.C.A.C.S.S.). The responding teachers reported a greater teaching load than that found in other studies and as recommended by N.C.A.C.S.S. The average number of periods taught per week was 28.45 periods. Teachers also reported a higher number of pupil-periods per week (932.31) than that recommended by the N.C.A.C.S.S. Fifty percent of the responding teachers indicated that they taught at all three grade levels (elementary, junior high, and senior high) with an average of 3 hours and 22 minutes devoted weekly to assigned duties other than classroom teaching. The average hours of the respondent's work week was 51 hours and 55 minutes. The teachers reported an average of 16.5 concert performances per teacher per year. Slightly more than 50 percent of the instrumental teachers reported contest participation and slightly less than 50 percent of the vocal teachers did so. Teachers in smaller communities (under 9,999) reported more contest participation (61.7 percent to 77 percent) than did teachers in larger communities (37.0% to 41.2%). (Faculty Advisor: E. E. Harris).

38. Collins, Thomas C. Music Curriculum Trends in Higher Education. Atlanta: Southern Regional Education Board, 1960. 137 pp.

An investigation was made of curriculum trends in institutions of higher learning which differed in size and organization and to find if any apparent patterns or trends were emerging. Florida institutions of higher learning were matched with a set of schools within the 16 state Southern Regional Education Board. An additional set of schools was obtained from various parts of the nation outside of the Southern Region. A preliminary questionnaire was compiled and revised by interviews with several

arbitrarily selected music educators as well as the Southern Region's Research Staff. A noticeable trend was found toward the possession of academic degrees among faculty members and away from the conservatory diploma or no degree. More than 60 percent of the deans or chairmen of the college music departments and the university schools of music held a doctorate. The diploma or non-degree administrator had diminished to one-third over a ten-year period. The N.A.S.M. was reported to have a very prominent voice in the accreditation of all the schools offering a music education curriculum, regardless of whether or not they are members of the association. State teacher certification requirements were becoming more universal throughout the country. The Bachelor of Music Education degree was emerging as the most frequently attained bachelor's degree in music. The Master of Music degree in applied music was appearing as the most prevalent degree on the upper level, with the Master of Music Education degree ranking second. Few curriculum changes were reported.

39. Colwell, Richard J. "An Investigation of Achievement in Music in the Public Schools of Sioux Falls, South Dakota." Unpublished Doctoral Dissertation, University of Illinois, 1961. 311 pp. (Ed.D.). (Univ. Micro. No. 61-4278).

The purpose of the study was to investigate selected aspects of pupil audio-visual discrimination achievement in music in one public school system. The subjects were 1298 students in the fifth and sixth grade; 832 in the seventh grade; 682 in the eighth grade; 465 in ninth grade; and 583 in high school. Eliminated were those studying non-school instruments privately, except piano, and physically handicapped students. Comparisons were made between vocal, vocal-piano, instrumental, instrumental-piano groupings in terms of I.Q. and scores on the Foss, Knuth Achievement Tests in Music, Aliferis Music Achievement Test, and Watkins-Farnum Performance Scale. In addition 93 pairs of subjects were created to test the value of selected instrumental methods books. It was found that the newer, song-based methods books resulted in higher achievement than the older mechanistic books. Instrumental and pianistic students consistently achieved higher scores on the Knuth and Aliferis tests. Students studying both instrumental and vocal music were the highest achievers. There is a positive relationship between the factors of academic average, music aptitude, intelligence quotient and music achievement. Instrumental-piano students were consistently higher at all grade levels. Musical aptitude did not prove to be as important in predicting music achievement as other factors. (Faculty Advisor: Charles Leonhard).

40. Conrick, John E. "The Relation of Certain Measures - Musicality, Personality, Social Preference, and Intelligence - to the Music Teaching Success of the Elementary Classroom Teacher." Unpublished Master's Thesis, University of Kansas, 1948. 77 pp. (M.M.E.).

An arbitrary sample of 30 teachers was selected from two school systems in a study of the relationship between music teaching success of the elementary classroom teacher and each of four factors: musicality, personality, social preference, and intelligence. The investigator then constructed a rating form for the music supervisors to use in evaluating the teachers' effectiveness. The Gaston Test of Musicality, Hugh M. Bell Adjustment Inventory, Minnesota Inventories of Social Attitudes (forms P and B), and Otis Self-Administering Test of Mental Ability were selected to measure the desired variables. The data were analyzed using the Pearson Product Moment correlation and Fisher t test. Musicality, personality, social preference, social behavior, and intelligence appeared to have little relationship to music teaching success and had no value in predicting music teaching success of the elementary classroom teacher. (Faculty Advisor: James F. Nickerson).

41. Corson, Donald B. "Administration of Instrumental Music in Selected Secondary Schools in New Jersey." Unpublished Doctoral Dissertation, University of Pennsylvania, 1948. 139 pp. (Ed.D.).

A stratified sample of New Jersey secondary schools of four organizational types was selected for an investigation of administrative practices in instrumental music. Techniques for stratification of the sample were arbitrarily established and questionnaires were sent to 72 New Jersey high schools to obtain practices of instrumental music administration. Of the 72 sent, 52 were returned. The reported practices were compared with 15 guiding principles established by a jury of experts. On the basis of academic preparation, teaching experience, and teacher load, only 15 schools employed a sufficient number of qualified teachers to carry on the instrumental program. Sixty-eight percent of the instrumental teachers carried more than the standard teaching load of 30 periods per week. Instrumental teachers were given responsibility for directing and developing the instrumental program in most schools. More dialogue was needed between teacher and principal. Only nine schools provided instrumental music offerings sufficient to meet the diversity of musical interests and abilities of all pupils. Most schools offered band, more than half offered orchestra, more than half offered class instrumental instruction, one-third offered small ensemble instruction, yet very few provided all four offerings. Almost twice as many pupils participated in band as in the other instrumental activities. Less than half of the schools scheduled all instrumental music during the school day. One-fourth of the schools had acoustically treated music rooms. A large majority of the schools maintained an instrumental music budget. Less than one-tenth of the schools maintained adequate records of instrumental pupils, materials and equipment. (Faculty Advisor: Jesse L. Scott).

42. Cory, Philip B. "A Survey of High School Competitive Music Festivals." Unpublished Master's Thesis, University of North Dakota, 1951. 94 pp. (M.S.).

A survey of practices found within the competition-festivals of the nation was made for the purpose of indicating the central tendencies and variations which may inspire ideas for changes as well as precedents for whatever changes may be contemplated. A list of sponsoring organizations for the competition-festivals in the various states and the officers of the sponsoring organizations was obtained from the MENC Bulletins and lists of persons were received from the officials. Questionnaires were sent to approximately five persons listed by the officers as being competent to give information concerning the subject. Information was obtained from 44 of the 48 states. Data were analyzed in frequencies and percentages. The central tendencies of the competition-festivals for the nation in 1951 were: the official music festivals were mostly competitive; the participating schools were most commonly divided into four classifications based on population of the high school; average traveling distances were 110 miles to district and 230 to final competition; three judges from college or high school faculties were the usual number hearing the large groups perform selections either from a list or freely chosen by the directors; bands usually also competed in sight reading; soloists and small ensembles were rated in a similar manner; instrumental entries were restricted in solo and ensemble contest to those instruments normally played in bands and orchestras; winners of top ratings were awarded certificates, medals or placques either by the contest organization or by the schools they represented; competition-festivals were sponsored either by the M.E.N.C. or by secondary schools activities association and were controlled by joint action of administrators and music directors; expenses were met by a registration fee for all student participants, by school membership dues, by event fees, and by gate receipts from a public performance. (Faculty Advisor: A. J. Bjork).

43. Cowan, Thomas W. "The Pre-College Musical Training and Experience of Music Education Seniors." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1952. 156 pp. (Ed.D.).

A survey was made of music education majors with respect to their pre-college music experiences. A questionnaire was constructed, pre-tested, and sent to a sample of approximately 1,000 senior, music education majors in 157 member institutions of the N.A.S.M. Usable returns were received from 480 students, a 48 percent return, or 24 percent of the total population (2,000 seniors in music education in N.A.S.M. schools in

1951-52). Letters then were sent to the directors of the various schools, represented by at least five seniors in the final sample asking them to indicate the graduates from their schools who fell in the upper and lower quartiles of the total music senior class for that year. The data were analyzed for significant differences between the upper and lower quartiles. The mean lengths of pre-college training in the major performance areas were: vocal - 3.2 years, piano - 8.3 years, wind instruments - 5.3 years, and strings - 6.6 years. Almost one-fourth of the vocal majors had no voice lessons before college. Percentage deficiencies were found in music theory, and factual as well as listening background in music. Significant differences were found between the upper and lower quartile groups in terms of (1) number of high school organizations in which they participated, (2) the total number of years of such participation, (3) confidence in the ability to sing a melody at sight and to sing a harmony part (in the pre-college years), (4) frequency of solo performance in high school, (5) leadership in musical activities. (Faculty Advisor: C. B. Hunt).

44. Cramer, William F. "The Relation of Maturation and Other Factors to Achievement in Beginning Instrumental Music Performance at the Fourth Through Eighth Grade Levels." Unpublished Doctoral Dissertation, Florida State University, 1958. 88 pp. (Ed.D.). (Univ. Micro. No. 58-2786).

The purposes of this study was to determine: (1) the degree of correlation between certain measures of physical growth and motor development and achievement in beginning instrumental music performance at the fourth through eighth grade level, (2) that level of maturity at which it is most feasible to begin the study of instrumental music, and (3) the correlation between achievement in beginning instrumental music performance and pitch discrimination rhythm discrimination, tonal memory, mental age, personality adjustment, and the total amount of playing experience. The following tests were given to 68 students (grades four through eight) after nine months of study on an instrument: Seashore Measures of Musical Talent, Kuhlman-Anderson Intelligence Tests, Rogers Test of Personality Adjustment, Watkins Objective Measurement of Instrumental Performance and Von Der Lugt Psychomotor Scale for Children. The height, weight, grip strength, and number of erupted permanent teeth were recorded. A panel of three judges evaluated certain motor movements while each student played a portion of the Watkins Test. Successful performance in the fourth through the eighth grade was significantly influenced by motor development and was accompanied by high standing in intelligence, pitch discrimination,rhythm discrimination, tonal memory, and personality adjustment. It was found that "optimum maturational conditions" are present at the seventh grade level for beginning purposeful instrumental music study if successful performance is the objective. No relationship between achievement in performance and physical growth was found. Previous playing experiences were found to be unnecessary for successful performance. (Faculty Advisor: W. L. Housewright).

45. Creitz, Dale P. "A Study of the Use of the Piano as a Space-Frame in Teaching Vocal Music to Children." Unpublished Master's Thesis, University of Kansas, 1943, 74 pp. (M.A.).

The purpose of the study was to determine whether or not the free and unrestricted use of the piano as a space-frame on the part of public school pupils can serve as a definite and effective aid in teaching vocal music. Fifty-four students enrolled in the fourth and fifth grades of one town were divided into experimental and control groups which were equated on age, I.Q., home music influence, musicality, and grade averages. The same teacher and identical materials were used for both groups, the only variable being the use of the piano as a space-frame. The duration of the experiment was nine months. An attitude test was devised by the writer but statements regarding attitude were considered inconclusive. The data were analyzed in frequencies and percentages. It was concluded that the free use of the piano as a space-frame by the pupils enabled them to successfully learn more materials, master songs more effectively, and to develop a desire to carry school music into their homes as well as their life outside the school. A space-frame and the use of hands were definite aids in tonal thinking. The piano keyboard presented an ideal space-frame for children of the intermediate grade level. (Faculty Advisor: E. Thayer Gaston).

46. Cucci, Angelo M. "A Study of Practices and Characteristics in Secondary School Music Education Programs Related to Participation of Students in Musical Activities." Unpublished Doctoral Dissertation, University of Illinois, 1955. 166 pp. (Ed.D.). (Univ. Micro. No. 15-195).

The purpose of the study was to identify factors which are related to musical participation by secondary school students. Twenty-four Illinois high schools were selected by the criteria of similarity in size, per capita cost, and type of school organization. A check list was constructed, refined, and pre-tested in two high schools. Each of the 24 schools was evaluated by the use of the check list during a personal interview with each school's music teacher. Percentages were compared. The following were found to have little or no apparent relationship to the percentage of students participating in musical activities: sex of teachers, amount of credit given for music activities, awards, summer band programs, restrictions on participation, utilization of student section leaders, social events for music students, booster clubs, publicity for performance groups, fees, guidance service, and practices in the elementary school programs. Because of infrequent occurrences, no relationships could be established between participation and the offering of a music major or minor and participation in music clubs. (Faculty Advisor: Charles Leonhard).

47. Culpepper, Leon R. "A Study of the Hearing Impairments in Defective Singers." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1961. 146 pp. (Ed.D.). (Univ. Micro. No. 61-5802).

An investigation was made of hearing impairments and defective singing among selected fourth grade students. One hundred thirteen fourth grade students in one public school were examined to detect hearing deficiencies of four types: diplacusis, hearing acuity, pitch discrimination, and tonal memory. Recordings were made of the students' singing, the recordings analyzed, and the 35 best and the 30 poorest students selected as subjects. Fifteen of the extremely defective singers were randomly chosen and placed in an experimental group. The remaining 15 served as the control group. The experimental group met daily for 30 minutes with the investigator during which time they listened to and sang with a set of basal series recordings. The control group remained in the classroom music lesson. The groups were compared at the end of the nine week experimental period by means of correlations and t tests. All comparisons indicated that there were no significant differences between various groups on hearing acuity. If the severity of a person's hearing impairment did not prevent his hearing music, it had little or no effect on his singing. Results of all comparisons indicated that there were significant differences in the means of the singer group and the defective groups on pitch discrimination and tonal memory. Characteristics of defective singing were: a smaller singing range than that required by the ambitus of the song, deviation from the true pitch of the notes in the musical score and, with few exceptions, the pitch error was below that of the note in the song. (Faculty Advisor: C. B. Hunt).

48. Dahlin, Walter O. "The Relationship Between the Conducting Needs of School Music Teachers and Present Practices in the Teaching of Conducting." Unpublished Project Report, Teachers College, Columbia University, 1951. 164 pp. (Ed.D.).

A study was made of the relationship between the conducting needs of school music teachers and present practices in the teaching of conducting. Two questionnaires were constructed, checked for ambiguities, revised, and sent to 570 school music teachers and music supervisors and to 503 teacher preparatory colleges. Of this number, 308 teachers and supervisors and 325 colleges returned questionnaires. Twenty-eight states were represented in the teacher/supervisor population which was stratified on seven factors. The data were analyzed by use of percentages, frequencies, and means. The mean number of semesters of conducting as reported by the music teachers was 2.751; the mean in quarters was 2.933. Nine percent of the music teachers had taken no undergraduate conducting courses, while 23 percent had completed no more than one semester or quarter of conducting instruction. Teachers ranked baton techniques, elements of interpretation, and conducting live groups in that order as being the areas

emphasized. A higher percentage of the larger institutions tended to offer undergraduate conducting courses than did the smaller institutions. Three percent of the small schools, 19 percent of the medium size, and 35 percent of the large institutions offered graduate courses in conducting. Sixty-one percent of the music teachers and 79 percent of the college instructors thought conducting should be taught two semesters. Rehearsal psychology was receiving increased attention; study of conducting texts was being de-emphasized and the use of recordings was more widespread than ever before. (Faculty Advisor: Norval L. Church).

49. Dalby, J. Philip. "A Study of Musical Activities, Instrumentation, and Technical Competence as Factors in Arranging Music for High School Bands." Unpublished Doctoral Dissertation, University of Oregon, 1958. 148 pp. (Ed.D.). (Univ. Micro. No. 58-359).

Obtaining and interpreting information about arranging or composing music for the high school band was the problem of the study. A questionnaire was designed to elicit from high school band directors information in the following areas: (1) current band size and instrumentation, (2) band activities, and (3) literature performed successfully. The questionnaires were sent to an arbitrary sample of 294 secondary school band directors in 13 states (middlewest and west). Usable returns were received from 211 (72 percent) of the band directors. Letters were sent to and received from 15 music publishers to determine (1) what they considered "always available" with respect to high school band instrumentation, and (2) their most popular publications for band in categories provided by the writer. Each "best seller" and each composition reported as being performed by the band directors was analyzed (N=58). Band activities in terms of frequency of occurrence (not necessarily total time spent) ranked as follows: pep rallies, street parades, dances, indoor concerts, football half-time shows, basketball half-time shows, out-door concerts, festival concerts and festival parades. The average number of yearly appearances was reported as 36.3. Between 10 and 14 percent of the total student bodies were reported to be enrolled in the school bands. With respect to technical competence, it was concluded that the median compass is the best guide to the most practical range of each instrument. The frequency of various range, rhythmic, embellishment, and other variables were analyzed in terms of the over-all difficulty of the compositions. (Faculty Advisor: Robert E. Nye).

50. Daniels, Ethel H. "An Investigation on the Effects of Exposure to Contemporary Music on the Interests and Attitudes of Ninth Grade Students." Unpublished Master's Thesis, Texas Southern University, 1961. 58 pp. (M.M.E.).

The effect of exposure to contemporary music on the interests and attitudes toward music of ninth grade students was investigated. Contemporary music was divided into five stylistic categories. Thirty-five ninth grade students from one high school were divided into two groups which met ten times in two weeks. A series of tests was administered before during and after the experimental period. Instruction was given regarding contemporary music classified stylistically as neo-romantic, impressionistic, expressionistic, realistic, and neo-classic. Attitudes toward contemporary music were indicated on a five point scale. During the first testing period there was reflected a general dislike for contemporary music. Attitudes exhibited during the first testing period were quite different from those exhibited at the end of the experiment. There was a 71.5 percent increase in favorable responses to impressionistic music, a 60 percent increase in favorable response to realistic music, and a 51 percent increase in favorable response to neo-classical music. At the final testing the students appeared to be more apt in their responses when asked to classify certain compositions according to the established categories. (Faculty Advisor: Nicholas L. Gerren).

51. Daniels, Neil M. "The Relation of Certain Personality Traits to Musical Likes and Dislikes." Unpublished Master's Thesis, Stanford University, 1934. 78 pp. (M.A.).

Bernreuter's Personality Inventory and a questionnaire were used for the purpose of discovering the relationship between personality traits, and musical preferences. Of

339 Stanford University freshmen to whom questionnaires were sent, 150 returned usable data. Scores on the Bernreuter scale were obtained for each student who returned the questionnaire. The respondents were grouped according to years of musical training and the tetrachoric correlation technique was used to establish the degree of relationship between personality factors and questionnaire items. It was found that there was little relation between years of musical training and musical likes and dislikes of college students as measured by the questionnaire. There was a slight but positive relationship between musical preferences and personality characteristics; the group favoring popular music tended to be less neurotic, less self-sufficient, more extroverted, and more dominant than the group favoring art music. The writer concluded that individual likes and dislikes for popular and art music were factors relatively independent of personality, that the basis of individual preferences must be sought elsewhere, either in environmental factors or in inherent physiological and psychological factors of a constitutional nature, or in both. Because the questionnaire used in this study was constructed arbitrarily, the investigator revised his conclusions to take account of this weakness. (Faculty Advisor: Reginald Bell and Paul R. Farnsworth).

52. Davis, Donald E. "A Survey of Public School Vocal Music In Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1954. 192 pp. (Ed.D.).

The music program content in representative schools of Oregon was surveyed. The literature pertaining to standards for school music programs was reviewed in formulating acceptable criteria for evaluative purposes of this study. State departments of education were contacted in an effort to locate relevant studies. Three questionnaires were developed and sent to administrators, music specialists, and elementary classroom teachers in public schools of Oregon and a fourth questionnaire was devised for high school students. Over one-fourth of all Oregon public schools from grades one through twelve supplied data. Supplementary visitations to eight representative schools (stratified by enrollment) were made during which time the fourth questionnaire was administered to a random sample of high school students. The data were analyzed in frequencies and percentages. Oregon high school music programs consisted almost entirely of bands, choruses, and a few orchestras. Instrumental training was widely found throughout the elementary schools and was usually available only to students who could afford an instrument. Non-classroom teachers were responsible for approximately 30 percent of elementary music activities. The music programs in most Oregon secondary schools were departmentalized. The instrumentalist has generally more vocal training than the vocalist has instrumental training. General music is usually taught by the vocal teacher. Elementary classroom music programs were found to be dominently and sometimes exclusively singing programs. (Faculty Advisor: Edmund A. Cykler).

53. Dean, Charles D. "The Seashore Tests of Musical Talent in Teacher Education." Unpublished Field Study Report, Colorado State College of Education, 1936. (Ph.D.).

The purpose of the study was to determine the value of the Seashore Tests of Musical Talent in predicting the probable success or failure for beginning college in required courses in sight-reading and ear-training. I.Q. Tests (Terman Tests of Mental Ability, Forms A and B), and the complete Seashore battery were administered to the entering freshmen at the Eastern Montana State Normal School in 1934 and 1935 (N=294). The means and S.D's of the two groups on these tests were compared. Correlations (Pearson Product Moment r) were calculated between I.Q. and the various Seashore sub-tests, and the Seashore sub-tests were intercorrelated. A pre-college music training index was determined for each student. Grades made in sight-singing course were correlated with past musical training, with I.Q., and with the various Seashore Tests. The relative potency of the various measures in predicting music grades was calculated by "path coefficients." Coefficients of determination were calculated and conclusions drawn. The relationship between intelligence tests scores and scores on the various Seashore tests ranged from + .01 to + .25. The relation between Seashore tests scores (whole test) and success in sight-singing was found to be relatively high (.65 $\pm$ .03 and .78 $\pm$ .02). The Seashore Memory Test showed a higher correlation with sight-singing than did any other single test with the other four tests showing a low correlation. The

relation of success in sight-singing to the amount of previous musical training was relatively low. The best combination of test scores for use in predicting success in sight-singing was found to be a combination of Seashore Pitch, Seashore Memory and years of musical training. (Faculty Advisor: J. S. Heilman).

54. De Vermond, Mary V. F. "Relationships of Piano Training to Ability of 205 Elementary Teachers in Carrying on Classroom Music Activities in Maryland." Unpublished Doctoral Dissertation, University of Maryland, 1959, 251 pp. (Ed.D.). (Univ. Micro. No. 60-1279).

A study was made of the relationship between the music background, experience, and training of elementary school teachers and the music activities they conducted in their classrooms as the activities related to the use of the piano. A sample of Maryland elementary teachers, stratified by school staff size, were the subjects. Of 253 questionnaires sent, 205 were returned. The questionnaire covered general background, training and experiences, self-evaluations of knowledge and use of the piano and opinions regarding the value of piano as a teaching device. The data were analyzed in frequencies and percentages. The subjects averaged 3.8 years of piano study, 80 percent having had pre-service or in-service classroom music courses. Sixty-eight percent were responsible for music in their classroom. Teachers with piano experience felt that they were better able to carry on classroom music activities than did teachers with no piano experience (sig. .01 level). (Faculty Advisor: Kenneth O. Houett).

55. Drake, Gordon V. "An Evaluation of the Formal Preparation of Secondary School General Music Teachers." Unpublished Doctoral Dissertation, Denver University, 1957. 221 pp. (Ed.D.).

A survey was made of the undergraduate music preparation of general music teachers and their professional responsibilities. Following a review of the literature relating to aims and curricula of music programs of both secondary schools and colleges, a questionnaire was developed and mailed to an arbitrary sample of 296 general music teachers in the Rocky Mountain area. The questionnaire was adapted from the "Standards for the Evaluation of the College Curriculum for the Training of the School Music Teachers," prepared by the Commission on Accreditation and Certification in Music Education. General music teachers were found predominantly in the small school systems. Over 90 percent of the teachers had four or more years of college. Two-thirds had a baccalaureate degree; one-third had a master's degree; one-third had a combination vocal-instrumental major; one-half majored in vocal, instrumental or some other music area. In small schools, the teachers had the responsibility of coordinating the entire music program from elementary grades through twelfth grade. The majority of teachers had a major in brass and woodwind instruments.

56. Dryden, Harry R. "A Survey of the Supervisory Practices in the Field of Music in Public Elementary Schools of Pennsylvania." Unpublished Doctoral Dissertation, University of Pittsburgh, 1954. 255 pp. (Ph.D.). (Univ. Micro. No. A54-1228).

A survey was made of the prevailing supervisory practices used by music supervisors in the public elementary schools of Pennsylvania through the sixth grade. A questionnaire was developed from the investigator's experience, the professional literature, a questionnaire developed by Ullemeyer, and from the Music Educ. Res. Council Bull. No. 18. Thirty interviews (with classroom teachers) were made to check the reliability of the questionnaire and further revisions were made after the questionnaire had been mailed to a small sample prior to sending it to the sample chosen for the study proper. Stratified samplings were drawn from the four classes of school districts in Pennsylvania. The data were analyzed by median, mode, and percentage comparisons. Most supervisors had adequate degrees, and 45 percent had attended graduate school. The greatest problem stated by the supervisor was that of dealing with individual teacher problems. Supervisors in larger districts had more teachers per supervisor than did supervisors in small districts. Most supervisors had no special method of evaluating teachers. Over one-third of the supervisors surveyed used "music talent tests." About one-half of the

supervisors correlated music with other subjects. Meetings, in-service training, conferences, presentation of professional literature, committees, and demonstration lessons were the most frequent methods used by supervisors to help teachers. Additional duties of the supervisors included: teaching, administration, preparation for public performances, and community leadership activities. (Faculty Advisor: Dr. H. T. Olander).

57. Duda, Walter B. "The Prediction of Three Major Dimensions of Teacher Behavior for Student Teachers in Music Education." Unpublished Doctoral Dissertation, University of Illinois, 1961. 201 pp. (Ed.D.). (Univ. Micro. No. 61-4285).

The purposes of this study were to determine (1) the correlation of selected traits of student teachers in music education with three major dimensions of teacher behavior in the classroom, (2) to make a selection of effective combinations of the significantly related factors, and (3) to derive multiple regression equations in the prediction of each teacher behavior. One hundred student teachers in music education at the University of Illinois were the subjects. The data were collected over a two-year period. Student teacher behaviors were obtained by the Classroom Observation Record and Glossary in which the college supervisor and the cooperating teachers evaluated observed behavior (classroom), providing the criterion data. Predictor data was obtained from scores on The Minnesota Multiphasic Personality Inventory, college grade averages, The IPAT Music Preference Test of Personality, Aliferis Music Achievement, Strong Vocational Interest Blank, and the Minnesota Teacher Attitude Inventory. Relationships were obtained by correlational techniques, including zero order correlations, and inter-correlation matrices of mean prediction scores. Intercorrelations indicated a fairly high (r=.66+0.85) degree of agreement between the persons who evaluated teacher behavior. Pupil ratings of the teachers were rejected as being not valid. Predictive measures which correlated with the criterion data at the .05 level or greater were college grades, all music area grades, the Aliferis rhythm sub-test, the music teacher scale of the Strong Vocational Blank, the Pd scale of the MMPI (negative r), and two factors of the IPAT test. (Faculty Advisor: Charles Leonhard).

58. Ehlert, Jackson K. "The Selection and Education of Public School Music Teachers." Unpublished Doctoral Dissertation, University of Colorado, 1949. 467 pp. (Ed.D.).

The purposes of this study were: (1) to discover the traits, abilities, and attitudes of music teachers which were considered important by superintendents of schools and music supervisors, (2) to discover weaknesses which caused the failure of teachers, and (3) to discover the opinions of these same people in regard to the type of training which teaching candidates should have. Further, the purposes were to examine the practices in music teacher education, to discover methods of selecting prospective music teacher, to study the duties of music teachers, and to discover the importance of various aspects of the teachers' education as evaluated by the teachers who are performing these duties. Three questionnaires were constructed and validated. One was sent to a stratified nationwide random sample of 568 school administrators, of which 233 questionnaires were returned. A second questionnaire was sent to the 148 institutional members of the N.A.S.M., 84 being returned. The third questionnaire was sent to 1019 school music teachers from which 327 usable returns were received. Superintendents and supervisors ranked the desirable attributes of music teachers in the following order: personality, musical training, teaching ability, interest in teaching, cooperation, discipline, intelligence, self-control, health, general culture, scholarship, performing ability, and teaching experience. The music attributes of the special music teacher (band, orchestra, chorus) generally were considered more important than for general music teachers. Supervisors and administrators ranked personality weaknesses and general teaching weakness as primary causes for teacher failure while lack of various performance skills were ranked as least important causes for failure. (Faculty Advisor: H. H. Mills).

59. Ekstrom, Robert C. "Comparison of the Male Voice Before, During, and After Mutation." Unpublished Doctoral Dissertation, University of Southern California, 1959. 275 pp. (Ed.D.). (Univ. Micro. No. 59-6120).

An analysis was made of the relationships among the characteristics in the male voice before, during, and after the adolescent change of voice. Tape recordings were made of 295 junior high boys voices at various stages of their voice cycle over a three-year period. The boys were grouped for analysis according to grade in school, in choir, band, orchestra, or no musical group. The tapes were played through an oscilloscope and pictures were taken of wave formations at various stages. Judges rated the voices according to agility, flexibility, and quality. Range, breaks, and tessitura were noted and the voices were categorized. Correlations were made between voice characteristics before, during, and after the change. It was found that specific characteristics before voice change continued into the changed voice such as a high or low range, light or heavy quality, flexibility and agility, and tessitura. The changed voice has three registers - head, natural, and falsetto. The falsetto is harmful if it is used as a regular practice, but it is helpful in developing the mezza voice. Raucous treatment of the voice during the change can be seriously harmful. Students who do not sing during the change will not improve in singing ability. General music class students improved as much as choristers. (Faculty Advisor: Ralph Rush).

60. Erneston, Nicholas. "A Study to Determine the Effect of Musical Experience and Mental Ability on the Formulation of Musical Taste." Unpublished Doctoral Dissertation, Florida State University, 1961. 176 pp. (Ph.D.). (Univ. Micro. No. 61-5637).

An analysis was made of the effect of musical experience and mental ability upon the formulation of attitudes, preferences, and discrimination which bear directly upon taste in music. Tests were administered to 780 subjects, the entire freshman class of Appalachian State Teachers College. The following measures were employed: a musical experience inventory, School and College Ability Tests, Hevner-Seashore Test of Attitude Toward Music, Wing Standardized Tests of Musical Intelligence, and the investigator's musical taste test. The scores on the various measures of musical taste were transformed to standard scores and combined to form a taste score. The population was subdivided into eight classes of experience. The analysis of variance and t tests were employed. An analysis of variance revealed that highly significant differences (beyond the .01 level) existed between taste scores of students who had not experienced any musical activities and students who had been active in music. No evidence was discovered linking any particular type of experience with a higher level of acquired taste. More experience appeared to be conducive to a higher level of acquired taste in music. In the group having no formal musical experience, mental ability did not prove to be a factor in taste development: however, high mental ability appeared to be a factor in musical discrimination. In the group having experience, mental ability appeared to be a significant factor. Men did not differ from women in taste formulation. No significant differences were found between the different groups studied in musical preferences. (Faculty Advisor: Manley Whitcomb).

61. Ernst, Karl D. "A Study of Certain Practices in Music Education in School Systems of Cities over 150,000 Population." Unpublished Doctoral Dissertation, University of Oregon, 1955. 222 pp. (Ed.D.).

A survey was made to study and compare current practices in music education of large city school systems with respect to supervisory staff organization, curriculum, administrative practices, personnel practices, instrumental materials, supplies and equipment, and inter-city and inter-school activities. A questionnaire was constructed based on information acquired from observations in selected city school systems and conferences with selected music supervisors. A tentative draft was submitted to a number of music supervisors for suggestions and then administered to two music supervisors for the purpose of eliminating any ambiguous items. The final questionnaire was sent to music supervisors in 57 cities of over 150,000 population, of which 28 were returned. An increase in the

time allowed for music instruction was found in the primary grades as compared to an earlier study. Yet, the average time allowed at the intermediate level fell short of the standard recommended by the M.E.N.C. There was disagreement regarding who should teach music in the elementary grades (classroom teacher vs. specialist). Sixty-nine percent of the cities reported that more than half of their classes were unable to read new songs at their respective grade levels. In comparison with a 1940 study, the writer concluded that between 1940 and 1954 orchestras failed to keep pace with bands in that they were equal in student membership in 1940 but by 1954 three-fourths of the high school instrumentalists were in bands. Only one-fourth of the cities in this survey made use of a central circulating library for sheet music. (Faculty Advisor: Edward A. Calder).

62. Evans, Carl H. "A Study of Factors Affecting the Attitude of the Elementary Classroom Teacher Toward Teaching Music." Unpublished Doctoral Dissertation, Northwestern University, 1958. 282 pp. (Ph.D.). (Univ. Micro. No. 58-5750).

The investigator surveyed factors which were believed to have an effect upon the attitude of the elementary classroom teacher toward teaching music. The factors chosen for this study were previous musical experiences in family, school, and community life. All persons who had graduated over a six year period (majoring in elementary education) from one college were sent questionnaires after a pilot study had been done to measure questionnaire reliability. Rating scales for those persons still teaching were sent to the respective elementary school principals. The data were analyzed by ranges of scores, modes, medians, and standard deviations. Correlations were used in establishing reliability of the questionnaire in the pilot study. The overall attitude of the elementary classroom teacher toward teaching music was favorable and the principals reported favorable ratings on the subjects as music teachers. Correlation coefficients indicated that the amount and nature of musical experience has some relationship to the subsequent attitude toward teaching music although the total amount of musical experience common to the individuals was found to be fairly low. Home music participation was listed more frequently than participation in music organizations. Those subjects having higher incidents of musical experiences also were higher in favorable attitudes. Areas in which subjects reported least confidence were singing alone, singing part songs, and playing the piano accompaniments. Men scored consistently lower than women except for ratings by the principal. Teachers of kindergarten through grade three generally scored higher than any other grade level teachers.

63. Falkner, Kenneth W. "The Influence of Music Education and Private Study on Adult Interest in Music in Two Selected Communities." Unpublished Doctoral Dissertation, State University of Iowa, 1957. 130 pp. (Ph.D.). (Univ. Micro. No. 57-4831).

The purpose of the study was to find some tangible evidence which would explain the relationship that exists between the adult's present interest in music and his association with music during the time he attended public schools. An interview form was constructed and subjected to a pilot study. Two cities, Oswego and Fulton, New York were selected as areas for the investigation. From music leaders, music dealers musicians unions, fraternal organizations, music clubs, and school administrators, a total of 431 subjects were chosen. Interviews were conducted. Adults participating in music at the time of the study were placed in a "high" group, and persons not participating were placed in a "low" group. All subjects had received public high school music instruction. The mean starting age of the "high" group was nine years, with a mean length of study time of four years. The majority of respondents who had been active participants of at least two musical activities in high school continued to be "keenly interested in adult musical activity." Many respondents in the "low" group, although they had had similar background experiences to those in the "high" group, with the single exception of the reaction to the music performed, answered negatively to the question regarding emotional or intellectual responses. The "low" group indicated that the instrumental music director was most often responsible for the initial selection of an instrument. When asked whether the respondent ("low" group) was now satisfied with the selection made by the director, the answer was more often negative than affirmative. (Faculty Advisor: Neal E. Glenn).

64. Farnsworth, Paul R. "Familiarity with the Names of Musicians." J. Appl. Psychol., 18 (1934), 97-102.

The investigator's purpose was to analyze the amount of familiarity shown for the names of musical personages. A list of names of 90 persons associated with music was selected. The list was submitted to approximately 600 students (9th grade - 100; 10th grade - 100; 11th grade - 100; 12th grade - 100; and college - 200 chosen randomly). The subjects were asked to respond to each of the 90 names by an answer of familiar or not familiar. Further, they were to mark the four "best known" names. Two large "unselected" groups of college sophomores claimed the same order of acquaintance (r = .99) with the names of 90 musicians deliberately chosen for being well-known, quite commonly known, and rarely known. This uniformity of response was found to extend down to the freshman high school level (r's = .92 to .99). For the "four best known" names, the correlation between groups was .87. Presumably, then the environment had produced considerable uniformity in this type of musical information.

65. Farnsworth, Paul R. "Auditority Acuity and Musical Ability in the First Four Grades." J. Psychol., 6 (1938), 95-99.

In a study of the validity of the Adlerian theory of organ inferiority as it relates to musical behavior, Farnsworth selected one hundred ten children from a total population of 1,169. Of the 110, 61 subjects were rated lowest and 49 were rated highest in musical ability by their teachers. Acuity values were obtained by use of an especially constructed audiometer; values for seven pitch levels were obtained for the left ear alone, the right ear alone, and for both ears. Correlations for auditory acuity values obtained for each ear and both ears were calculated and critical ratios were employed to test significance of the differences observed between group scores. It was found that in only one instance was there a statistically significant difference between the auditory acuities of the two groups and this held for only one of the three procedures. However, 15 of the 21 Critical Ratios, while not statistically significant, did favor the Adlerian hypothesis.

66. Farnsworth, Paul R. "Ratings in Music, Art, and Abnormality, in the First Four Grades." J. Psychol., 6 (1938), 89-94.

An analysis was made of the relationships between music ability, art ability and abnormalities found among students from the first four grades in three school systems. Teacher ratings were obtained on 1269 public school students in grades one through four regarding musical ability, art ability, effort, adjustment to teacher, adjustment to classmates, handedness and speech defects. The stability of these ratings was checked by a re-administration of the rating scale the following year. The data were analyzed by use of correlation coefficients, standard deviations, and critical ratios. The data gave no support to the contention that children rated high in esthetic abilities are more abnormal, sinistral, or defective in speech than their less esthetic counterparts. Subjects who were rated high in music and art ability were considered by their teachers to be significantly better adjusted than were those who received lower esthetic ratings. The teachers' ratings proved to be fairly stable over a period of one year.

67. Farnum, Stephen E. "Prediction of Success in Instrumental Music." Unpublished Doctoral Dissertation, Harvard University, 1950. 190 pp. (Ed.D.).

The purpose of this study was to develop a test which would provide guidance for children who are being considered for beginning instruction in instrumental music. An exploratory test was designed (based on other tests) and administered to 170 high school instrumental pupils. The tests, upon which the instrument was based, were reviewed and reliabilities stated. Pooled judgments of teachers were used to determine item discrimination. The instrument - The Farnum Music Test - was administered to a random sample of seventh grade students and the reliability coefficients computed. The Watkins Performance Test for the Cornet or Trumpet was adapted for all band and orchestra instru-

ments. Correlations and intercorrelations were obtained of scores on subtests of the preliminary form of the Farnum Music Test and the adaptations of the Watkins test. Partial and multiple regression coefficients were computed (Beta weights). (Faculty Advisor: Henry Dyer).

68. Fenton, Winnifred L. "Effectiveness of Music Teachers Identified Through Behavioral Criteria: A Basis for Redirection in Teacher Education." Unpublished Doctoral Dissertation, Wayne State University, 1957. 228 pp. (Ed.D.). (Univ. Micro No. 58-1177).

A survey was made to determine what constitutes the effectiveness or ineffectiveness of music teachers in our public schools as they are observed in functional situations. The Critical Incident Technique, developed by John C. Flanagan, was employed. A stratified nationwide sample of 4000 public school administrators, experts, and teachers was attempted; however, only 700 critical incidence forms were returned. The critical incidence forms had been validated, and two experienced professional analysts were used to check the investigator's methodology. The 700 critical incident forms were categorized by the writer and a three-man jury. The data sheets with critical incidents coded were processed, and the data were analyzed in frequencies and percentages. Two-thirds of the incidents reported occurred within the classroom. The high number of incidents in the category of the Music Teacher's Personal Qualities for Leadership was indicative that there was a strong tendency to preserve the "trait" approach to teacher qualifications. The teachers and those engaged in teacher education were the most conscious, insofar as their critical incidents reflected, of the skills and abilities needed by the teacher as a director of learning. The number of ineffective incidents reported by male administrators in relation to the music teacher's personal qualities for leadership, skill in defining and setting goals, and interpersonal relationships, could be interpreted as a conflict in certain attitudes and interpretations of the function of music teacher in the schools in which they work. It was concluded that the list of behaviors of the effective music teacher could be developed into selection, pre-service education, placement, and in-service education of the music teacher. (Faculty Advisor: Lynn Nicholas).

69. Fisher, Rhoda L. "Preferences of Different Age and Socio-Economic Groups in Unstructured Musical Situations." J. Soc. Psychol., 33 (February, 1951), 147-152.

The investigator proposed to determine whether differences in musical preference between age and social status groups represent specifically learned reactions to specific compositions, or whether they represent a more generalized kind of difference defined in terms of disparity in broad frames of reference. A sample of 251 subjects was stratified according to socio-economic strata and included students from the sixth grade, the tenth grade, and college. The subjects ranked, according to their preference, excerpts from unfamiliar compositions by Haydn, Tschaikovsky, Strauss, Stravinsky, and Gould. Tests of significance were computed between the expressed preferences in terms of socio-economic class, age, and sex. It was discovered that the reactions of the sixth grade students was not significantly different from those of the college student. Subjects who came from an unskilled lower economic status group did not differ in reaction to the music from subjects who came from the professional upper status group.

70. Fisher, William R. "The Construction and Validation of an Instrument to Measure Musical Appreciation." Unpublished Doctoral Dissertation, Boston University, 1949. 130 pp. (Ed.D.).

The investigator's purpose was to construct and validate an instrument for the purpose of measuring musical appreciation of students from the seventh through the twelfth grades in the secondary schools and of students in college. Five multiple-chord subtests were constructed on the factors of music appreciation as identified by H. P. Weld, E. Dikinson, and J. L. Mursell as follows: I-Mood, II-Imagery and Association, III-Rhythm, IV-Instrumental timbre, V-Factual knowledge. Subtests I-IV comprised recorded musical examples and written instructions, the latter being based on Thorndike's word

lists. Subtest I was validated by a group of fifteen experts--music educators and performers. Subtest II was validated in terms of composition title face validity and expert opinion. Subtest III items were selected in terms of face validity and expert opinion. Subtest IV was arbitrarily selected. Subtest V was based on a survey of literature and was screened by experts. A preliminary administration led to revisions of vocabulary and ambiguous items. The revised test was administered to 400 subjects in the seventh through twelfth grades for the purpose of item analysis. The decoy value of items was determined; initial ratios for item potency were computed; and an index of ease was determined. Items in the final form of the test discriminated at the .01 level of significance and were placed in a rotating order of difficulty within a subtest. The final test was administered to 1005 subjects in senior high schools and three colleges. An Index of Musical Experience was developed and used to determine statistical validity. The validity coefficient was +.82. A coefficient of Correlation with I.Q. scores was +.62±.02. Reliability coefficients were .96 and .93. (Faculty Advisor: William C. Kuaraceus).

71. Fite, Kenneth A. "Cost of Participating in Music Activities in Selected High Schools of Kansas." Unpublished Doctoral Dissertation, University of Kansas, 1954. 106 pp. (Ed.D.).

A survey was made to determine the required cost to the student for his participation in the music classes of selected high schools of Kansas. Questionnaires were designed and validated for school administrators, music supervisors, students, and music dealers. Twenty-six schools were randomly selected from the middle 50 percent of Kansas high schools, as determined by school enrollments. School administrators, music supervisor, and student questionnaires were distributed in the schools, while dealer questionnaires were received from an arbitrary sample of eight music dealers. The purpose of the latter questionnaire being to establish depreciation costs. It was concluded that cost rarely was related to the size of school enrollment. The schools studied appeared to have no consistent policy with respect to formal class fees for music organizations. The annual cost of owning a band instrument was more than four times as great as the annual cost of owning a string instrument. The most expensive annual cost associated with participation in school music organizations was money spent for private lessons. The cost to the student playing an individually-owned instrument was twice as great as the cost to the student using a school-owned instrument. The total of all costs incurred by students enrolled in band was nearly 50 percent greater than comparable costs associated with orchestra, and was more than twice the comparable costs for students enrolled in each of the school choral organizations. (Faculty Advisor: E. Thayer Gaston).

72. Fletcher, Arnold. "Problems of a Group of Beginning Music Teachers: A Follow-Up Study of Recent Graduates of West Chester State Teachers College." Unpublished Doctoral Dissertation, University of Pennsylvania, 1956. 308 pp. (Ed.D.).

The purpose of the study was to determine (1) the problems of beginning music teachers, as perceived by them and by their respective administrators, and (2) to obtain the opinions and recommendations of these teachers with regard to their professional preparation. Potential problems were obtained from appropriate sources, and evaluated by a jury, producing a 100 item questionnaire. This instrument was pre-tested and further evaluated. Final questionnaires were sent to the entire population of 1948-1952 graduates (N=343) and to their first administrators. Returns were received from 90 percent. Reliability was determined by a readministration to 25 percent of the population. The year of graduation produced no significant difference in responses. The vocal phase of teaching classroom and general music was reported as a great problem. The two major difficulties in classroom music were reported to be the boy's changing voice and maintaining the boy's interest in singing. Areas involving pupil interest, motivation, and individual differences ranked high as problems. Reported problems did not appear to vary with size or type of school or community. Beginning music teachers appeared to be less concerned with problems connected with extra-classroom activities and responsibilities than with those related to the instructional aspects of their special field.

Administrators reported control of pupil behavior as the most outstanding problem. Professional relationships were the source of least difficulty as reported by the administrators. The graduates reported that their courses in elementary music methods, applied music, and student teaching as being most helpful, while they suggested better preparation in dealing with junior high and senior high school problems. (Faculty Advisor: Roderic P. Matthews).

73. Forman, Robert B. "The Extent of Agreement in Attitudes Toward Music Education Practices Among Southern Illinois High School Students as Measured by Kendall's Tau." Unpublished Doctoral Dissertation, Florida State University, 1958. 213 pp. (Ed.D.). (Univ. Micro. No. 58-2788).

A survey was conducted to measure the amount of agreement which existed among high school students regarding their attitudes toward music education practices. An arbitrarily constructed questionnaire concerning attitudes was sent to students from six Southern Illinois high schools; 1047 were returned. The sample was chosen arbitrarily within each school and total school populations were not represented in the responses. Respondents were grouped according to whether they were presently enrolled in school music. All subjects agreed that the following practices (in order) were most important for a school music program: to teach students to play instruments, to teach basic music fundamentals, to teach students how to sing, and to provide musical programs for the community. Least important practices recognized by the subjects were: a self-supporting music program, teaching songs that will be sung later, correlation with other subject areas, illustrating the poor examples set by disc-jockeys and jazz music programs, and the statement "gives an appreciation of the coordination and timing needed in good baton twirling". (Faculty Advisor: K. D. Kuersteiner).

74. Fott, Solie. "The Youth Education Activities of the Nashville Symphony Association." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958. 112 pp. (Ph.D.). (Univ. Micro. No. 59-1097).

A music preference test was constructed in order to determine whether musical programs presented in the schools of Nashville significantly affect the musical taste of the students exposed to these musical programs. One-hundred musical excerpts were selected and rated regarding musical worth by 33 music educators and professional musicians. "Q" values were obtained on the judges' ratings of the 100 excerpts, while 21 excerpts in each of the following areas of intrinsic worth: great, moderate, and little. The method of equal-appearing intervals were used. The music preference test was then administered to the students who had been exposed to the concerts and to a control group of students not having been exposed. Effects of the various types of concerts on the various grade levels were measured by application of Lindquist Type III design (analysis of variance), the critical difference between means, (analysis of variance) summed scores, and reliability coefficients (used in a pilot study only). It was concluded that there was no statistically significant change in musical taste after the series of concerts were played for the seventh through twelfth grade students. (Faculty Advisor: C. B. Hunt).

75. Franks, Dean K. "A Study of the Success of West Seattle High School Students in Language Arts, Foreign Language, Social Studies, and Music and Art." Unpublished Doctoral Dissertation, University of Washington, 1958. 207 pp. (Ed.D.). (Univ. Micro. No. 58-3273).

An analysis of junior high school records was made to determine the extent to which success in high school can be predicted from such records. Criterion data were high school grades in language arts, foreign language, social studies, music, and art. Multiple correlations were computed and all correlations were computed separately for males and females. Junior high school grades and standardized test scores were correlated with senior high school grades after being transformed to Z values. Regression equations were developed from these correlations. Forty cases were randomly chosen to test the

accuracy of the final regression equations. In I.Q. r's, the lowest correlation for boys and girls on all subjects studied was found in music and art grades, and I.Q. was not considered an important part of the prediction battery. Reading comprehension test scores was one of the best prediction factors except for girls' high school music and art grade predictions. In foreign languages, music, and art, junior high school grades were better predictors than reading or I.Q. test scores. For predicting boys' high school music grades, the best factors in order were: junior high school industrial arts grades, reading comprehension test scores, and junior high school language arts grades. For girls high school music grades the best predictors were junior high school social studies grades, junior high school home economics grades, and I.Q. In general, the factors were the same for predicting high school grades for each sex except in music and art. (Faculty Advisor: August Dvorak).

76. Fred, Bernhart G. "The Instructional Values of an Exploratory String Instrument in a Fourth Grade." Unpublished Doctoral Dissertation, Northwestern University, 1956. 250 pp. (Ph.D.). (Univ. Micro. No. 57-4231).

A study was made of the effect of instruction, using a string instrument, on the musical achievement and motor dexterity of fourth grade children. A fretted string instrument (which could be bowed or plucked) was designed by and produced for the investigator. Fifty-two fourth grade students were randomly assigned to control and experimental groups. Pre-tests consisted of the Kotick and Torgerson Tests of Achievement in Music, Knuth Achievement Tests in Music, and Minnesota Rate of Manipulation Test. Pretest difference were analyzed by means of t tests. The experiment occurred during 24 class periods. The experimental group received instruction on the exploratory string instrument while the control group received traditional instruction in singing and music fundamentals. Post-tests consisted of alternate forms of the achievement tests and the manipulation test. The data were analyzed by means of t tests, standard error of difference between means, and standard deviation. No significant differences were found between the two groups with respect to their performance upon the three measures. An exploratory-type string instrument that could be bowed and plucked, easily played and readily taught was successfully developed and produced commercially. It was found that basic string experiences could be presented in an effective manner by a classroom teacher who had not had previous training in playing or teaching a string instrument. (Faculty Advisor: C. A. Burmeister).

77. Freeburne, Frederick G. "Functional Secondary Piano Training of Music Teachers." Unpublished Doctoral Dissertation, Indiana University, 1952. 234 pp. (Ph.D,). (Univ. Micro. No. A53-2076).

The adequacy of music teacher preparation with respect to piano skills was surveyed. Related literature was reviewed, questionnaires were constructed, evaluated by a jury of experts and refined. Questionnaires were completed by 202 public school music teachers and representatives of 79 colleges. All subjects were from the nineteen-state North Central Area. Data were analyzed in frequencies and percentages. The piano training of most public school teachers in the area studied was determined to be inadequate. Larger schools, and schools belonging to N.A.S.M. were more conscious of the necessity for determining that their students attain a certain degree of piano proficiency. The teacher's use of piano varied according to the music subjects taught. Music teachers and music department or school of music administrators agreed on the order of importance of most of the specific piano skills to music teachers, but teachers valued most of the skills more highly. (Faculty Advisor: Thurber Madison).

78. Freeman, Warren S. "A Survey and Evaluation of the Current Status of Music Education Activities in the Public Schools of the United States." Unpublished Doctoral Dissertation, Boston University, 1955. 193 pp. (Ed.D.). (Univ. Micro. No. 15-082).

A status study was made of music education in the public schools of the United States in order to ascertain the frequency of the various music education activities and

to evaluate each activity in terms of its contribution to the musical growth of students. A questionnaire was constructed and mailed to a random sample of schools stratified by city populations. Before mailing, the questionnaire was tested for reliability and a validity check was made. The questionnaire was refined applying criteria developed by Koos. Of 500 questionnaires sent, 282 were returned. The data were analyzed by frequencies and percentages. It was concluded that there has been some broadening of the music education curriculum in recent years, but in most communities there was evidence of only a small fraction of the activities listed by the Research Council (M.E.N.C.) in the Outline of a Program for Music Education. The band was the predominant instrumental activity and it had supplanted the orchestra. A positive correlation appeared between expenditure for education and extent of education. In the communities which had a broad program of community music activity there was also a broad program of high school music activities. (Faculty Advisor: William C. Kuaraceus).

79. French, Elizabeth I. "A Study of the Relationship of Scores Obtained on the Gaston Test of Musicality and the Seashore Measures of Musical Talents to Responses to Four Thematic Apperception Test Pictures." Unpublished Educational Research Study, University of Tennessee, 1962. 76 pp.

An investigation was made of the relationship between personality, as measured by a projective test, and musical capacity, as measured by both an omnibus theory test and an elemental music test. Subjects were 106 students from the ninth grade of one junior high school. Instruments employed were the Seashore Measures of Musical Talents, the Gaston Test of Musicality, and four pictures (nos. 1, 11, 12BG, and 19) from the Thematic Apperception Test. The TAT responses were written and scales were devised by the writer. In each of the music test categories the highest 29 scores were compared to the lowest 29 scores for each of the six personality scales established by the writer. The magnitude of difference was measured by chi square. The hypothesis, that high scorers on the music tests will project more affect responses than will the low scorers, was confirmed at the .02 level. The following chi square values were significant: Affect for Gaston Test (pages two and three) -- .02 level, more low scorers than high in the Gaston Test (page one) section failed to mention music in their responses to TAT picture 1 .01 level. (Faculty Advisor: J. Clark Rhodes).

80. Friend, Ruby S. "An Experimental Investigation of the Seashore Musical Tests with Special Reference to Their Reliability for Children of Kindergarten Age, and to the Relationship Between the Children and Their Parents in the Performance on these Tests." Unpublished Master's Thesis, University of Minnesota, 1930. 47 pp. (M.A.).

An experiment was conducted to determine whether a reliable test of the Seashore Measures of Musical Talent could be successfully given to children of the kindergarten age and to determine what relationship, if any, exists between the ability of the children and that of their parents in the performance on these tests. The pitch, intensity, and consonance tests were given individually to 42 kindergarten children. Special directions, understandable to the children, were devised. The same tests were administered to 25 fathers and 35 mothers of the children. Both parents were asked to rank themselves, their spouse, and their child as to musical ability on a five-point scale. Test retest method and the Pearson Product Moment correlation were used to establish reliability. Intercorrelations of the three tests were computed. Correlation coefficients then were obtained between the following variables; teacher ratings of child - child's test results; teacher's rating - parents' ratings; parents' test results - child test results; parent's self-rating - rating by spouse. The reliability of the tests was found to be +.778. The three teachers' estimates of the children's musical ability produced a correlation of +.74. The following correlation coefficients also were obtained: teacher rating - child's test results (+.15); parents' rating - child's test results (+.28); parent - child for pitch test (+.144); parent-child for intensity test (-.111); parent-child for consonance test (-.078); and father's rating of child-mother's rating of child (+.861). (Faculty Advisor: Florence Goodenough).

81. Friend, Ruby S. "Influences of Heredity and Musical Environment on the Scores of Kindergarten Children on the Seashore Measures of Musical Ability." J. Appl. Psychol., 23 (1939), 347-357.

A possible relationship was examined which may exist between the musical ability of five-year old children and that of their parents as measured by adaptations of three of the Seashore tests as well as to discover the musical environment of the children. Forty-two children and 60 of their parents were chosen as subjects. Background information on the subjects included chronological and mental age, I.Q., and rank placement regarding the father's occupation on the Minnesota Classification for Urban Occupations. The Seashore Tests of Pitch, Intensity, and Consonance which had been revised by McGinnis for young children was given to the children twice. The parents were given the Seashore test also and were asked to rate their children regarding musical ability. Correlations were then computed between the possible relationships. There was a positive but very low correlation between parents' ratings of their child's musical ability and his test scores. The over-all parent-child relationships were for the most part positive, but not high.

82. Gaffney, James C. "An Investigation of the High School Dance Band as an Aid to Music Education in the Public Schools of Missouri." Unpublished Master's Thesis, University of Denver, 1959. 79 pp. (M.A.).

A survey was made (1) to determine the purpose of high school dance bands, (2) to determine which functions the dance band fulfills in the educational system, and (3) to determine whether or not the high school dance band satisfies the requirements of an educational system designed to get results from limited time and money. Questionnaires were sent to all public high schools in Missouri having an enrollment over 100 students with 163 schools replying. The data were analyzed in frequencies and percentages. It was concluded that larger schools evidently find it much easier to support a dance band than the smaller schools, although dance bands of smaller schools participated more in the community. Varied instrumentation was found to be in use and the use as a concert ensemble rather than a dance music ensemble was reported. Seventy percent of the rehearsals were held out of school hours. Most dance bands averaged one to two hours of rehearsals per week. Financial assistance from the school budget was widespread. Auxiliary equipment such as fronts, lights, and loudspeakers, although used, were not considered by directors to be necessary. The usual library consisted of less than 50 arrangements. (Faculty Advisor: Roger D. Fee).

83. Garder, Clarence E., Jr. "A Study of Characteristics of Outstanding High School Musicians." Unpublished Doctoral Dissertation, University of Kansas, 1953, 129 pp. (Ed.D.).

An assessment of the abilities, interests, and temperaments of outstanding high school musicians was sought in this study for the purpose of providing data which might prove of value to guidance and instructional personnel. A pilot study was effected which yielded 77 high school music student autobiographies. From these autobiographies a questionnaire was arbitrarily constructed to obtain factual information. A group of 279 music students ranked as to musical ability by their high school music teachers and a corresponding group of 281 students from study halls were chosen as subjects. All subjects were then given the Guilford-Zimmerman Temperament Survey and the questionnaire. The t test and the F test were employed in group comparisons. When the music and the non-music groups were compared, it was found that the music group had earned more athletic awards, held more class and club offices, and had earned more honors and awards than had the non-music group. Comparisons on the Guilford-Zimmerman survey revealed significant differences between the two groups as measured by the F and the t tests. Male music students were less active, less stable emotionally, less objective, less adept in personal relations, and less masculine in interests. The female music students, when compared with the non-music students proved less restrained, less objective, less friendly, and less adept at personal relations. (Faculty Advisor: James F. Nickerson).

84. Garretson, Robert L. "A Study to Identify Specific Teaching Problems Confronting Illinois High School Choral Directors." Unpublished Project Report, Teachers College, Columbia University, 1955. 188 pp. (Ed.D.).

The problems confronting high school choral directors were surveyed in order to find a systematized and organized educational approach for assisting choral directions. A questionnaire was constructed and sent to all high school choral directors in Illinois including both public and private schools. There were 305 usable returns. Problem areas listed in the questionnaire were 1) problems of planning and management, 2) rehearsal problems, 3) problems of tone and diction, and 4) conducting problems. A rank order of frequency distribution of item response was constructed. The rank order distribution was divided into quartiles and the frequency of items for each problem area was tabulated in each quartile. The priority of concern was thus established for each type of problem. Respondents indicated that tone and diction were the most troublesome problems, namely, the elimination of strident nasal tones and the development of resonance and voice control as well as clear consonants and vowel consistency. The next troublesome area was rehearsing including problems of accurate pitch, blend, music reading and teaching an understanding of interpretation elements and style, planning and management problems included grading, scheduling, and the selection of music. The least troublesome area was conducting in which accuracy and precision of movements as well as physical strain were the primary problems. (Faculty Advisor: H. R. Wilson).

85. Gaston, E. Thayer. "A Study of the Trends of Attitudes Toward Music in School Children with a Study of the Methods Used by High School Students in Sight-Reading Music." Unpublished Doctoral Dissertation, University of Kansas, 1940. 194 pp. (Ph.D.).

The purposes of the study were to ascertain some of the attitudes of school children toward various phases of their musical experience, to discover dominant factors in the development of the attitudes, and to define the relationship between the factors and the attitudes. "Attitude" and "Home Influence" scales were constructed, checked for reliability, and administered to a random sample of 500 students in grades three through seven of ten schools. Teachers rated students on music achievement. A sight reading test was constructed and administered to a random sample of 250 high school students from 10 high schools. A majority of children revealed a positive attitude toward most of the phases of their spontaneous musical experience. The method of solfeggio was not found to be an effective means of developing the ability to read music, or of developing desirable attitudes toward music. An inverse ratio between grade level and positive attitude toward music was discovered. Girls had a more positive attitude toward music than did boys. Extra-school music experienced by the child appeared to be more dominant in the development of positive attitudes toward music than did music of the school. Intelligence appeared to be a significant factor in the musical scholarship of school children, while musical scholarship appeared to be a significant factor in the development of positive attitudes by school children toward music. A significant relationship was found between home musical influence and the musical scholarship of school children. (Faculty Advisor: Bert E. Nash).

86. Genge, Milton H. "Guidance and Selective Retention Practices in Music Teacher Training." Unpublished Doctoral Dissertation, University of Southern California, 1959. 426 pp. (Ed.D.). (Univ. Micro. No. 59-2935).

The investigator's purpose was to establish criteria for guidance and selective retention practices in music education, as determined by leaders in music education and by those graduates of colleges and universities in the eleven Western States who were teaching music in the secondary schools. A preliminary evaluation schedule was developed. The schedule was then evaluated by undergraduate and graduate music majors. The final evaluation schedule was sent to an arbitrary sample of 149 college and supervisory personnel in music, and to 242 graduates from 38 western colleges. A 75 percent return was received. The mean index rating for each criterion was computed. Possible differences between groups were analyzed by means of t tests. It was concluded that guidance and selective retention in music education should be considered a continuous program, begin-

ning during the pre-admission period. Letters of recommendation from high school music teachers and high school transcripts were the most important admission procedures. Successful participation in music groups was considered an important prerequisite for admission to the music education program. Orientation practices were all rated higher by supervisors than by college personnel. Leadership experiences prior to the junior year in college were not considered of great value. The greatest degree of agreement concerning selective practices were in the areas of musical competencies. The use of standardized tests was rejected or considered of questionable value after the initial testing program. Advising was considered one of the most important areas in the guidance and selective retention of music education majors. (Faculty Advisor: Ralph Rush).

87. Gernet, Sterling K. "Musical Discrimination at Various Age and Grade Levels." Unpublished Doctoral Dissertation, Temple University, 1939. 172 pp. (Ed.D.).

A music preference test was constructed to discover the degree of musical discrimination at various instructional levels. The influence of age and prior training in the revealing of selective judgements was examined. The preference test ranged in idiom from "severely classical" to "jazz" and was constructed with the assistance of college students and faculty. Test items were validated by music supervisors, critics, composers, and concert artists in response to a questionnaire. The validating criteria were intrinsic musical worth, quality of musical structure, emotional and aesthetic appeal, and style, i.e., classical, semi-classical, and popular. The test items were scaled according to the compiled experts' responses with classical selections receiving the biggest value and popular jazz selections receiving the lowest. The resulting test was given to a sample of 2,548 students from one college, three elementary schools, and eight high schools in a four-state area. Retest reliability was .55$\pm$ .035. The K-D Musical Aptitude test was also administered to 1,614 of the subjects. Psychological data for 1,507 of the subjects was obtained from their institutions. The study revealed an inconsistent but significant change toward classical music at successive levels of maturity. Between the ages of 12 and 17 the change was sporadic but in the college years it was an accelerated increase. The greatest differences were between schools rather than between grades or ages. There was no relation between music preference and sex or intelligence but there was some relationship to musical aptitude. The adolescent, especially the junior high school age group, preferred sentimental, highly emotionalized, strongly rhythmic, and distinctly melodic music in which words contributed to the total effect. Musical aptitude was found to be a slightly more significant factor in the determination of music preference than was intelligence. (Faculty Advisor: Frederick H. Lund).

88. Gilbert, J. Richard. "A Study of Some of the Traits of Secondary-School Instrumentalists and the Relationship of These Traits to Achievement in Instrumental Music." Unpublished Master's Thesis, Syracuse University, 1943. 207 pp. (M.M.).

Comparisons were made between nine traits of secondary school instrumental music students and correlations were developed between four standardized tests and achievement in instrumental music as measured by teachers' ratings. One thousand subjects from seven communities in New York State were chosen (grades seven through twelve). The following measurements of each subject were obtained: sex, age, height, weight, lung capacity, and scores on the Physical Fitness Index, K-D Tests, Otis Self-Administering I.Q. test, and teacher rating of musical achievement. Correlation coefficients, ratio of mean differences, percentages, and the critical ratio were employed. There was no significant difference attributable to sex in the mean ages of secondary school instrumentalists, length of time studying a musical instrument, teachers' ratings, and scores of the K-D and I.Q. tests. Boys were significantly superior to girls on all physical measures used. Teachers rated boys significantly superior to girls on brass instruments. The mean lung capacities of the woodwind and brass groups were significantly larger than those of the string and piano groups. The string players had the highest means on the Physical Fitness Index, I.Q., and K-D scores. Percussionists ranked lowest on all measures. Of the individual instrument groups, the oboists and bassoonists ranked highest on K-D, I.Q., and teachers' ratings. Teachers were rather conservative in their ratings in comparison with the earned K-D scores. The teacher ratings also more nearly

approached the normal curve. Correlations between K-D scores and teachers' ratings tended to rise in direct proportion to years of instruction. The lowest correlation was between the Physical Fitness Index and teachers' ratings. (Faculty Advisor: Jacob Kwalwasser).

89. Gilfeather, Charlotte V. "Motivation of the Below Average Adolescent in Junior High School General Music Classes." Unpublished Master's Thesis, Texas Christian University, 1962. 76 pp. (M.M.E.).

Curriculum publications from 30 school systems in cities of over 350,000 population were obtained for the purpose of evaluating the content, methods, and materials designed to motivate below average music students. The investigator reviewed the literature on the general topic in sociological and psychological sources. Of 32 school systems canvassed, 30 returned data. The list of developmental tasks, as developed by Robert J. Havighurst, was used as a statement of motives important to below average groups in the classroom. Curriculum bulletins were investigated to identify methods and materials which may have been designed to meet these developmental tasks. The canvass revealed considerable interest in the problems attached to meeting the needs of below average adolescents in junior high school general music classes. There was strong recognition of the need for meeting a wide range of individual differences and abilities, and concern for factors of motivation, methods, and materials suitable for these students. Motivation factors thought to be useful were peer approval, interest, curiosity, working for tangible rewards, and competition. (Faculty Advisor: Lawrence A. Hanley).

90. Goetzmann, Edward C. "An Investigation of Specific Factors Related to Minor Performance Area Classes in Music Education Curricula." Unpublished Project Report, Teachers College, Columbia University, 1962. 200 pp. (Ed.D.). (Univ. Micro. No. 63-2252).

A survey was conducted to determine the status and incidence of patterns of practice in the minor performance area in relation to specific factors in music education curricula in teacher training institutions. Questionnaires were sent to 172 colleges which were members of N.A.S.M. and which offered bachelor's degrees in music education. Returns were received from 90 colleges. The responses to the questionnaires were analyzed by mean, median, and percentage scores. College catalogues were obtained for the purpose of checking the responses to the questionnaire. The study was delimited so that philosophies and generalizations were eliminated. Teacher training in minor performance areas was shown to be inadequate by N.A.S.M. standards in the areas of band and orchestral instruments for vocal and piano majors, in voice for instrumental majors, and in all other instruments other than violin, clarinet, and trumpet. Piano proficiency tests were usually required. N.A.S.M. recommendations were not met by more than 40 percent of the schools studied. The largest classes were found in the Northeastern U.S. whereas, the smallest classes were found in the North Central U.S. State supported schools offered more instrumental classes than other schools. The Northeastern schools offered more classes per institution. (Faculty Advisor: Ernest E. Harris).

91. Good, Melvin L. "Music in Selected Virginia Elementary Schools Having No Music Specialist or Music Supervisor." Unpublished Doctoral Dissertation, University of Virginia, 1961. 224 pp. (Ed.D.). (Univ. Micro. No. 61-4343).

A survey was made of elementary school music programs in selected Virginia elementary schools having no music specialist or music supervisor. A questionnaire was developed and a pilot study was run using five music teachers as respondents. Questionnaires were sent to 49 schools of the stratified random sample of 98 schools, while interviews were conducted with music teachers and principals of the remaining 49 schools of the sample. The results were tabulated and expressed in percentages and medians. The general status of the elementary music programs in the schools involved in the study was found to be inadequate when compared to the bulletin, Music in Grades One Through Twelve. Fourteen percent of the white schools and 25 percent of the Negro schools reported no music being taught. Fifty percent reported that the programs were planned to provide an

organized, logical flow of materials and experiences. Rote singing was the most commonly used method for learning new material. Very little difference was found between the music programs of the white schools and those of the negro schools. The white seemed to be slightly more solvent in matters of money, equipment, and materials, while the negro schools were perhaps slightly ahead in matters of interest, initiative, and application. (Faculty Advisor: Bernard N. Busse).

92. Gordon, Edwin. "A Study to Determine the Effects of Training and Practice on Drake Musical Aptitude Test Scores." Unpublished Doctoral Dissertation, State University of Iowa, 1958. 89 pp. (Ph.D.). (Univ. Micro. No. 58-2959).

The purposes of this study were to determine (1) whether scores on the Drake Musical Aptitude Tests are affected by training and practice, and (2) whether initially high scoring students will retain an advantage over initially low scoring students. After taking the Drake Musical Aptitude Tests as a pre-test, the 20 subjects were divided into an experimental and a control group with five low and five high scorers in each group. The subjects were 14 and 15 years old. The training consisted of 20 one-half hour sessions of rhythm and phrasing instruction. At the end of each week a memory test devised by the author was given for instructional purpose and progress checks. The group was motivated by offering prizes for the three best gains and a dinner for all at the end of the sessions. At the end of the experimental period both groups were re-tested on the Drake tests. The data were analyzed by analysis of covariance, t test, and correlation techniques. The data obtained suggested that neither the scores on the Drake Musical Aptitude Tests can be significantly improved with remedial training and practice, nor was there any conclusive evidence that initially low groups or initially high groups benefit to unequal degrees from this type of training on the Musical Memory Test. Consequently, the Drake Musical Aptitude Tests may be considered tests of musical aptitude and not tests of musical achievement. The correlation between Memory and Rhythm Tests was low (.315), but according to the investigator it suggests that the two tests are measuring independent factors. (Faculty Advisor: Neal H. Glenn).

93. Graves, Winifred S. "Adolescents' Musical Training as a Function of Parent-Child Relationships and Associated Personality Variables." Unpublished Doctoral Dissertation, Columbia University, 1950. 106 pp. (Ph.D.). (Univ. Micro. No. A50-574).

The hypotheses tested in the study were (1) that parents who offer their children music lessons tend to be warmly accepting of their children and, if this is true (2) children who take music lessons are likely to show less emotional conflict than children who do not take music lessons. An I.Q. test was given to all junior and senior high school students in one school system. Seventy-one pairs of subjects were chosen (matched on five variables). The Kerr-Remmers American Home Scale was used to establish socio-economic status. Four other instruments were also employed to gather background data on the subjects, their parents, and their community. Differences between the paired groups were tested by the t test. The music group seemed to have a better opinion of both parents than did the non-music group. The non-music subjects showed more conflict with parents, particularly the mother, than did the music group. There was little difference between the two groups of parents in the area of past musical experience. Both parents of the music group seemed more satisfied with their present occupation than did the parents of the non-music group. The parents of the music group appeared to be more lenient than did the parents of the non-music group and the fathers of both groups appeared to be more strict than the mothers. The subjects in the two groups had approximately the same outside interests but the non-music subjects had a greater range of out-of-school interests. (Faculty Advisor: Arthur T. Jersild).

94. Gray, John J. "Subject Matter Testing Practices in State University Music Education Curricula." Unpublished Doctoral Dissertation, University of Southern California, 1960. 373 pp. (D.M.A.), (Univ. Micro. No. 60-6203).

A report and evaluation of current testing practices in music education curricula of selected state colleges and universities was made in an effort to achieve a greater unanimity of objectives which could provide a point of departure for the raising of music teaching standards. A brief historical review of curriculum practices in music education was undertaken and the influence of M.T.N.A., N.A.S.M., and M.E.N.C. was recognized. Requests were made by mail to 67 apparently arbitrarily selected state universities requesting copies of testing materials used in classes required of music education majors. Returns were received from 45 institutions. The following courses were required of every music education major in all responding institutions: music history, theory, conducting, and music education. From the numerous tests used at the cooperating institutions a "minimum standards" examination in each of the above areas was compiled and sent to the cooperating institutions and their faculty for evaluation. After the faculty members had evaluated the test items the final refinements were accomplished during which weak items were eliminated. There was a large amount of knowledge which the panel of authorities (the 63 faculty members) agreed upon as being important basic subject matter. From a total of 351 questions in the first compilation, only 55 were rejected by the faculty as being not necessary. (Faculty Advisor: Ralph Rush).

95. Gray, Thomas L. "An Investigation of the Changes in Teaching Concepts of Student Teachers of Music." Unpublished Doctoral Dissertation, The State University of Iowa, 1962. 118 pp. (Ph.D.). (Univ. Micro. No. 63-924).

The investigator sought to determine (1) what change may occur in the teaching concepts of student teachers during student teaching, (2) whether high-rated and low-rated student teachers differ with regard to such change, (3) whether the teaching concepts of student teachers become more like those of effective music teachers during the student teaching period, and (4) whether the Q-technique is a suitable research tool in music education. A list of 42 teacher characteristics were submitted to student teachers who then arranged the characteristics in a forced-normal distribution according to how frequently the statements described them. Second, they arranged the characteristics so that they described an "ideal" music teacher. A panel of five widely known music educators nominated the most effective music teachers of their acquaintance. These effective music teachers arranged the same statements so that they were (1) self-descriptive, and (2) descriptive of the "ideal" teacher. The teaching concepts of the student teachers did change during the period of student teaching. The teaching concepts of high-rated and low-rated student teachers were found to differ. Furthermore, the high-rated students' self-descriptions changed significantly more in the direction of effective teachers than did those of low-rated student teachers. During the student teaching period, the teaching concepts of all subjects in the study generally became more similar to those of effective music teachers. (Faculty Advisor: Neal E. Glenn).

96. Groff, Patrick J. "Self-Estimates of the Ability to Teach Music." Music Educ. J., 48 (February-March, 1962), 140-141.

A survey was conducted to determine prospective elementary school teachers' self-evaluation of their ability to teach music when compared with the other subjects ordinarily taught at the elementary level. Student teachers (N=645) in six California colleges were asked to put into rank order, according to their judgment of their own ability to teach, eleven elementary school subjects (arithmetic, art, handwriting, music, oral language, physical education, reading, science, social studies, spelling, and written composition). The first-place ranking was weighted 11 points, second place 10 points, etc. A test for statistical significance was run. Students ranked their ability to teach elementary music as ninth. Men, who comprised approximately 15 percent of the total group, ranked music eleventh. The difference in the percent of points given to music by men versus women was statistically significant at the .05 level in favor of the women. Music received only .2 percent more points than did the eleventh ranked subject, while the first ranked subject received 36.6 percent more points than did music. Twenty percent ranked music first, second, or third while 47.1 percent ranked it ninth, tenth, or eleventh.

97. Grove, Eugene F. "Three Areas of Student Personnel Services for Undergraduates Majoring in Music Education." Unpublished Doctoral Dissertation, Indiana University, 1953. 226 pp. (Ed.D.). (Univ. Micro. No. A54-217).

A survey was made of the actual program for specific areas of student personnel services as they are applied to undergraduates majoring in music education in a select group of colleges, universities, and independent conservatories. A check-list was developed from the writer's personal experience as well as techniques used in student personnel work and vocational guidance. It was submitted to a group of five persons for determination of item clarity, revised, and sent to an arbitrary sample of 93 of the 170 members of the N.A.S.M. Usable returns were received from 52 of the 93 institutions. The data were tabulated in percentages. General selection and admission practices in the majority of schools were responsibilities of the general admissions director of the college, rather than a music school (dept.) representative. With regard to the counselor, it was found generally that: music education counselors are part-time counselors and part-time teachers: the head of the music department appointed counselors; the counselor's knowledge of vocational requirements for music education majors was the primary consideration given by the majority of privately and publicly supported institutions, while conservatories reported experience in public school music teaching to be the first prerequisite; fewer than 25 percent of the institutions reported in-service training for counselors. Six institutions reported special conference days on which high school officials were invited to confer with their former students. The primary purposes of periodic interviews between music education students and counselors were to plan courses of study and to check the students' education progress. (Faculty Advisor: Thurber H. Madison).

98. Hales, Bernell W. "A Study of Music Reading Programs in High School Choruses in the Rocky Mountain States." Unpublished Doctoral Dissertation, University of Oregon, 1961. 142 pp. (Ed.D.). (Univ. Micro. No. 61-4524).

An analysis was made of music reading programs in high school choruses within a limited geographical area, assuming that the results would be representative of those to be found in any cross section of the United States. A questionnaire was constructed and sent to selected high school vocal music directors. The data were expressed in percentages. It was concluded that the size and kind of high school influenced the extent of the choral offerings but had no effect on the numbers, sizes, and kinds of choruses which offer music reading instruction. Most of the vocal music reading instruction took place in elective or preparatory groups. There was a direct relationship between the length and frequency of choral class time and the existence of adequate music reading instruction. There was a tendency to confine music reading instruction to a specific segment of time within the choral rehearsal. Few choral directors considered music reading to be an integral part of the rehearsal. Regular choir literature was considered preferable to special published materials in the teaching of music reading. Over-emphasis on performance in select choirs was a major factor in limiting the amount of literature studied and amount of time spent on music reading activities. Although teachers strongly favored music reading instruction, two-thirds said that music reading instruction was not a major objective of their choral programs. Music reading was considered by high school choral directors to be a worthwhile activity in regional festival competition. (Faculty Advisor: Robert E. Nye).

99. Hammer, Harry. "An Experimental Study of the Use of the Tachistoscope in the Teaching of Melodic Sight-Singing." Unpublished Doctoral Dissertation, University of Colorado, 1961. 309 pp. (Ed.D.). (Univ. Micro. No. 62-1245).

The purpose of this study was to determine the effect of tachistoscopic training on the development of melodic sight-singing ability at the fourth grade level. Students from one Colorado city were chosen as subjects for the experiment. The subjects were all being instructed in a conventional manner using the text Our Singing World. This text was retained throughout the experiment for purposes of keeping the instruction constant. Forty-seven tonal configurations identified by Petzold were chosen for use

with the tachistoscopic technique. The examples used in the tachistoscopic process were subjected to arbitrary but rather stringent criteria. The procedures for instruction and the experimental methods were fully detailed. Criteria were very carefully established for the establishment of melodic sight-singing ability. Tests for evaluation were done individually. Scoring methods were stated. Statistical measures employed included t tests and Mann-Whitney U Tests. Tachistoscopic training was significantly more effective than conventional teaching procedures in developing melodic sight-singing ability. For tachistoscopic teaching, students must have had prior experience in sight-singing. Tachistoscopic training was more effective than conventional teaching procedures in teaching melodic sight-singing to subjects who measured above average in pitch discrimination and tonal memory abilities. However, it was not superior to conventional training in teaching melodic sight-singing to subjects who measured above the class average in I.Q.; but it was superior in developing this skill in subjects measuring below the class average in I.Q. Tachistoscopic training was more effective than conventional teaching procedures in teaching melodic sight-singing at the fourth grade level. (Faculty Advisor: William N. Reeves).

100. Hargiss, Genevieve. "The Acquisition of Sight-Singing Ability in Piano Class." Unpublished Doctoral Dissertation, University of Kansas, 1960. 174 pp. (Ed.D.). (Univ. Micro. No. 60-1851).

A comparison was made between the differences in sight reading ability resulting from two differing methods of teaching. Sixty-four persons enrolled in an elementary music education course at the University of Kansas were chosen as subjects. After each subject had been given a battery of standardized tests three groups were equated according to musical experience. The investigator was the instructor. Each of the three groups were divided into experimental and control subgroups. The experimental groups received an emphasis in vocal as well as piano sight reading. The control group received only piano instruction with no special emphasis on vocal sight singing. Test batteries were administered both before and after the experimental period. The data were analyzed by t tests and analysis of variance. There were no statistically significant differences between the groups on the Knuth Test after the experimental period. Differences between Gaston Test of Musicality scores earned by the two groups were not statistically significant differences between the groups. In the sight-singing test, students in the experimental group made a greater gain from pre-test to post-test than did students in the control group. (Faculty Advisor: E. Thayer Gaston).

101. Harlan, Henry G. "An Analysis and General Evaluation of Public School Courses of Study in Music." Unpublished Doctoral Dissertation, The University of Texas, 1940. 239 pp. (Ph.D.).

An analysis and a general evaluation was made of courses of study in music in the United States. A check list was constructed following criteria stated by seven sources. The seven sources were evaluative techniques in general education. The check list consisted of ten main criteria and 50 items of evaluation. The 78 courses of study (public school) which were available to the writer were evaluated by use of the check list. Thirty-seven of the 48 states were represented and the grade levels for which the courses of study were written were fairly evenly divided although the sample was arbitrarily chosen. Both state courses of study and city courses of study were represented. The courses of study, taken as a group, ranked highest with respect to the inclusion of the following: literary construction, aims-objectives, and extra-curricular activities. They ranked lowest with respect to the inclusion of a definitely stated Philosophy. State courses were superior to city courses and secondary courses were superior to elementary courses of study. State courses showed a similarity to secondary courses, and city courses to elementary courses, in terms of the average scores. (Faculty Advisor: Fred C. Ayer).

102. Harrison, Russell M. "A Survey of Public School Instrumental Music in Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1954. 243 pp. (Ed.D.).

A survey was made of instrumental music education practices in the Oregon public schools. A stratified random sample of Oregon public schools was made. Strata selected were elementary, junior high, and senior high schools. Questionnaires were sent to principals, music supervisors and all music teachers in 223 senior high schools, 30 junior high schools, and 246 elementary schools. Eight schools, arbitrarily selected, were visited. Criteria for the evaluation were based on established criteria of N.A.S.S.P. and M.E.N.C. Areas evaluated were course offerings, physical conditions and facilities, and teacher certification and qualification. The two most emphasized areas in instrumental music were band and orchestra. Only 1.8 percent of all schools had class piano. Junior high schools ranked higher than the other school classifications in course offerings of instrumental music, percentage of total students in instrumental music, and number of music reference books. Sixty percent of all music teachers sampled were men. Women outnumbered the men in elementary school. All respondents considered music facilities inadequate. One-half of the high schools offered one credit per semester for music, the remainder offering one-half credit per semester. Band had more annual performances than any other instrumental group. Vocal music teachers were the largest single group of music teachers. Elementary music teachers had the least amount of professional training; junior high school music teachers having the most. Instrumental music teachers averaged six years of higher education, while more than half of the vocal teachers had less than five years of higher education. (Faculty Advisor: Edmund A. Cykler).

103. Hartzell, Ralph E. "An Exploratory Study of Tonality Apprehension and Tonal Memory in Young Children." Unpublished Doctoral Dissertation, University of Cincinnati, 1949. 208 pp. (Ed.D.).

An analysis was made of the tonality apprehension and tonal memory abilities in young children as revealed in their singing of familiar songs and dictated musical materials and to determine the relationship of some of the factors underlying tonality apprehension and tonal memory to ability. The subjects were 135 students from grades one to three in one elementary school. Pre-test recordings were made in a second school. Subjects were recorded individually for the tonal apprehension test. Sixty-four students from the school's primary choir were then given the tonal memory test, these being the only students who had the vocal ability to perform dictated materials. Both the dictation and the subject response were recorded. The recordings were transcribed to graphs (constructed in semi-tones). Students were classified in their ability to establish and maintain tonality. Relationships were determined by the use of the coefficient of mean square contingency and tests of significance. There was a significant correlation between tonal apprehension and tonal memory when the latter was tested by the ability to remember the specific melodies of familiar songs. When tonal memory was tested by the immediate recall of dictated tonal materials the correlation was statistically significant. There was a significant correlation between tonality apprehension, age and grade placement. Children with superior ability tend to improve with chronological age, which was not the case with those having inferior ability. Intonation errors were made more frequently on ascending intervals than on any other tonal sequence. Ascending fourths, fifths, minor sixths, and minor sevenths, and descending fourths, fifths, minor sixths, and major thirds were found to be the most difficult intervals for primary-grade pupils. (Faculty Advisor: Gordon Hendrickson).

104. Hattwick, Melvin S. "The Role of Pitch Level and Pitch Range in the Singing of Preschool, First Grade, and Second Grade Children." Child Development, 4 (1933), 281-291.

An investigation was made of the mean pitch level and the mean pitch range used by preschool, first grade, and second grade children when voluntarily choosing and singing any song. Forty-five children (ages four and one-half through six), from one city were arbitrarily chosen as subjects. Each subject sang self-selected familiar songs which were recorded. A group of 37 subjects corresponding to the first group in age and grade

level was selected. Recordings were made after 28 and 48 practices. The mean pitch level used by all subjects of the first group, when singing voluntarily at any pitch level they wished, was significantly lower than the mean pitch level for these same songs as they were presented in songbooks for these ages. The mean pitch range for the preschool subjects in the first group was significantly smaller than that sound for songbooks intended for the preschool age. Such a significant difference was not found concerning range means for the older subjects. After 48 group practices on one song, the mean pitch level for the preschool children remained significantly lower than that presented by the teacher having the practice period. The mean pitch level used after 48 practices was not significantly different from that used by these same subjects when singing voluntarily any song they wished in any pitch level they chose. A comparison of mean pitch levels revealed that all groups under all conditions imposed by the study actually sang significantly lower with known and unknown amounts of practice than they were taught to sing according to printed song text books.

105. Havolvic, Arthur J. "A Study of Boys' Voices and Song Material in the Senior High School." Unpublished Master's Thesis, University of Cincinnati, 1937. 44 pp. (M.E.).

The pitch ranges in the voices of tenth, eleventh, and twelfth grade boys were recorded and an analysis was made of the pitch requirements in the boy's parts of song material in order to determine the extent to which boys' vocal ranges include or coincide with the ranges of tenor and bass parts in song material. Subjects were 650 boys from one large high school requiring attendance in vocal music classes. The intent was to accept only those tones which were produced without strain and which would be acceptable for good choral singing. Volume and quality were major considerations for the lowest extremeties and strain for the highest. The findings indicated that the average boy's vocal range is greatest before he loses the higher tones of his unchanged voice and is smallest immediately after he loses the unchanged tones. His range develops after the changing period becoming an average scope of an eleventh. The smallest range found was a third and the greatest was two octaves and a fourth. In analyzing the literature for changed voices, it was found that the tenth grade boy must have a range of a ninth to sing a tenor part or a range of a fourteenth for the bass part. In the eleventh and twelfth grade, the range must be a fourteenth for the tenor part or a fifteenth for the bass part. Extreme tones were found in a small part of the literature. Concerning the number of boys with the range necessary to sing all of the pitches in his part, only 18.6 percent in the tenth grade, 3.7 percent in the eleventh grade, and 2.4 percent in the twelfth grade had the capacity. In performing their parts, only 67.0 percent were able to sing the range of the complete part satisfactorily. (Faculty Advisor: L. A. Pechstein).

106. Heffernan, H. and Ralph Matesky. "Organization and Supervision of Music Education in the Elementary Schools of California Cities." Calif. J. Elem. Educ., 24 (August, 1955), 197-203.

A survey was made of the organization and supervision of music education in the fourth, fifth, and sixth grades of the elementary schools in California city school districts. Of 99 inquiry forms sent to city school superintendents in California, 96 were returned. The status of organization and supervision of music education in these city schools was then analyzed in frequencies. All school districts surveyed reported both vocal and instrumental music in the elementary schools with the exception of two districts. The two districts not having music reported as the reason that financial considerations, as well as lack of musically competent classroom teachers, forced music out of the classroom curriculum. Seventy-eight percent of the districts devoted approximately 100 minutes a week to music. Only seven percent of the districts had no special glee club or choral music. All but nine districts included special choral work in the regular school day. Fifty-two districts reported music festivals while 37 reported no festivals. Seventy-five percent of the districts reported music in-service workshops for classroom teachers. Sixty-two percent of the districts indicated that supervisors visited the classrooms regularly. Sixty-nine percent of the districts reported regular personal or

conferences instigated by the music supervisor. Sixty-seven percent of the districts reported adequate equipment.

107. Heiliger, Louise A. "The Effect of Training Upon the Musical Performance of Five-Year-Old Children." Unpublished Master's Thesis, University of Iowa, 1936. 63 pp. (M.A.).

The possible effect of training upon the musical performance of five-year-old children was investigated. A preliminary study of approximately six months was conducted to develop tests and techniques. The reliability of student interest ratings by two judges was established in two separate experiments and music tests were devised and tested for three months. The subjects for the main experiment were 36 five-year-old children who were matched on scores in music ability encompassing four items, and the interest ratings. A questionnaire was sent to the parents of the subjects but was not used in the matching process. The music ability test reliability was established by the test-retest method. Both groups were tested periodically during the term of the experiment and the critical ratio was used for determining the significance of mean differences. The method developed and employed for measuring the vocal ability of five-year-old children to reproduce single pitches, intervals, and three to five note phrases was found reliable as was the method for observing, through overt behavior, children's interest in music activities. The experimental group improved over the control group and the experimental group continued to improve throughout the forty training periods. The largest gains occurred during the first 15 training periods. Improved singing ability of the experimental group was accompanied by an increase in interest. (Faculty Advisor: Dr. Ruth Updegraff).

108. Henderson, Stanley L. "Factors, Differences, Trends and Relationships in the Administration and Supervision of Music in Fourteen Selected School Systems." Unpublished Doctoral Dissertation, The State University of Iowa, 1959. 218 pp. (Ph.D.). (Univ. Micro. No. 59-3797).

The purposes of the study were: (1) to investigate current practices, policies, and trends in administration and supervision of music in mid-western cities, (2) to discover difference between large and small cities in administration and supervision of music, and (3) to determine the relationship between pupil achievement in music and various factors associated with music administration. Fourteen arbitrarily selected mid-western city school systems were studied by observations, interviews (supplemented with questionnaires), and techniques for self-evaluation developed by the Cooperative Study of Secondary School Standards. Comparisons between large (over 306,000 population) and small (under 306,000) city school music programs were made in areas of practices, policies, and trends in music administration as well as in pupil achievement in music and administrative competency. Percentages and rank correlations were used for data analysis. State laws, high physical education requirements, budget, emphasis on performance, poor facilities, and inadequacy of the supervisor often affected practice and policies in music adversely. Large and small cities differed greatly in relation to administration. Factors in administration related to pupil achievement were: (1) competency of administrative staff, (2) educational leadership at supervisory level and principal level, (3) the total load in personnel management, and (4) the teacher-pupil ratio. A significant relation between administration and pupil achievement was noted only in the smaller schools. (Faculty Advisor: Neal E. Glenn).

109. Henry, Edna L. "The Intrinsic Interests of Adolescents as Indicated by Their Choice of Out-of-school Activities." Unpublished Doctoral Dissertation, Northwestern University, 1941. 255 pp. (Ph.D.).

A survey was made of the out-of-school activities in which adolescents were engaged and the trends of these activities over a two-year period. One hundred and twenty-two of 1,017 entering high school students in Evanston, Illinois were selected by stratified random sampling. The variables on which the stratification was determined were age, sex, father's occupation, teacher's rating, and I.Q. Diaries were kept by the subjects for

short periods within a two-year period. The diaries and an interest inventory developed for the study were analyzed in frequencies, percentages, and central tendencies. The data were collected over a two-year period during which time interviews were conducted partially for cross validation of diary entries. Discrepancies were noted between the data from interviews and the data from diaries in the following areas: playing music for one's own amusement, concert and recital attendance, and types of phonograph recordings played. Practice occupied the greatest amount of time in the area of music activities while only 10 to 20 percent took private music lessons. More than twice as many girls were taking music lessons than were boys. Listening to records was the activity in which the greatest agreement was displayed between sexes. An increase in time spent listening to records was noted as the subjects moved from freshman to sophomore rank. Participation in choirs was the most frequent out-of-school music performance activity. Radio listening time was devoted largely to music of the "swing band" variety. Only two books on music and musicians appeared on the out-of-school reading lists. Only girls reported concert attendance in their diaries. Music activities attracted a greater proportion of the subjects than any of the arts and the "arts activities" were the most unstable of all out-of-school activities.

110. Herren, Lloyd K. "A Study of the Administration of Student-Teaching Courses for Music Education Majors in Texas Schools and Colleges." Unpublished Doctoral Dissertation, University of Texas, 1955. 324 pp. (Ed.D.).

A survey was made for the purpose of (1) evaluating the policies and practices employed by the senior colleges of Texas in the administration of their student-teaching programs for music education majors, (2) comparing the administration of the student-teaching programs for music education experts, and (3) making recommendations for the improvement of music education student-teaching in Texas colleges and universities. Two questionnaires were constructed and were refined by being submitted to the music education faculty of the University of Texas. Catalogues were analyzed from the 34 Texas institutions. One questionnaire was sent to the persons heading the student-teaching program in each of the 34 senior colleges holding membership in the Texas Association of Music Schools (26 usable returns received). A list of 86 music education "experts" was obtained. Fifty were chosen by the University of Texas music education faculty to serve as judges. The judges were from all regions of the United States. The second questionnaire was submitted to the judges for opinions of an "ideal" student-teaching program. Case studies were made of four institutions. Many inconsistencies were found between the content of the college catalogues and information obtained through questionnaires and visits, in course descriptions, in prerequisites for student-teaching, in clock hours spent on student-teaching, in the number of courses in student-teaching offered and in the credit granted for courses in student-teaching. There were very few required qualifications for student-teaching administrative and teaching personnel. A significant comparison could not be made regarding the field service or follow-up service. (Faculty Advisor: Archie N. Jones).

111. Hevner, Kate. "Tests for Esthetic Appreciation in the Field of Music." J. Appl. Psychol., 14 (1930), 470-477.

The investigator's purpose was to measure the appreciation of listeners for musical compositions played on the piano. A sample of 78 harmony students and 81 psychology students at the University of Minnesota was arbitrarily selected. The groups were further divided so that there were four groups making two groups of harmony students and two groups of psychology students. The tests were administered, the pianist being shielded from the group by a screen, the same pianist being used for all presentations. A short excerpt from each of 21 compositions was performed four ways: (1) correctly, (2) tones omitted, (3) elaborated, and (4) phrasing or melodic progression was changed. Each listener recorded his preference among the four versions of the excerpts. He was awarded two points for selecting the original version and one point for making the original version his second preference among the four. Scores were totaled and correlations were run between this score and scores on the Seashore Measures of Musical Talent, a college ability

test, artistic judgment tests, etc. Four of the 21 items were repeated to check consistency. The repeated test items showed no consistency in the judgments of the listeners. The items in which only the pianist's interpretation of the music was varied were not of any diagnostic value. There did not appear to be any pronounced time error involved in presenting the four different versions in succession in that no position appeared to be favored. The psychology students showed a tendency to favor the eliminated or simpler version and the harmony students to favor the elaborated version while the two groups showed an exactly equal tendency to prefer the changed phrasing.

112. Hevner, Kate. "A Study of Tests for Appreciation of Music." J. Appl. Psychol., 15 (1931), 575-583.

Employing a mutation technique, the investigator developed a standardized objective test for appreciation of the beautiful in music which would attain a satisfactory degree of both reliability and usefulness. In this article Hevner reported the revision of a music test which she had previously constructed. Test items were piano compositions and variations made by mutating the original compositions in specific ways. The original test involved four versions of each composition. The form reported here included only the original composition and one mutation. Various forms of the test were administered to high school students; university psychology, music, and music education students; and members of a college music club. The report was based on test results from 313 subjects. Test results were compared with percentile ranks on the Seashore battery and were also correlated. Mean and sigma scores were obtained from groups of subjects as well as from the entire group. Results on the two-version test form corresponded closely with results from the four-version form in reliability, validity, and relationship to other mental and musical traits. Experimental variation of the test directions and instructions to the subjects revealed that specific information designed to facilitate the listener's satisfaction with his own performance in general insured a more favorable attitude on the part of the subjects toward these tests.

113. Hills, Richard L. "The Status of Music Instruction in the Public High Schools of Missouri." Unpublished Doctoral Dissertation, The State University of Iowa, 1962. 224 pp. (Ph.D.). (Univ. Micro. No. 62-2393).

In a status study of public school music in the State of Missouri, a questionnaire was devised, refined, and submitted to each secondary school music teacher and his principal in the state. Of 535 questionnaires sent, 444 were returned. It was found that very few music teachers were called upon to teach non-music subjects. Many secondary teachers were required to work with students in grade school and junior high school. Of the music teachers who responded, men outnumbered women more than two to one. Courses considered of little or no value by the music teachers were Introduction to Education, History of Education, Secondary School Administration for Teachers, and Preventative Medicine. Student Teaching, Techniques of Secondary School Teaching, and General and Educational Psychology were generally felt to be of value. Most teachers reported that they supplemented their income with outside work. Course scheduling of music was the major problem reported. Academic courses in music were not commonly offered. (Faculty Advisor: Neal E. Glenn).

114. Hixson, Paula M. "The Status of Junior High School Choral Music in the State of Texas." Unpublished Master's Thesis, University of Texas, 1953. 71 pp. (M.M.).

A status study was made of junior high school choral music in Texas. A questionnaire was constructed and sent to an arbitrarily selected sample of 220 junior high schools, which were assumed to be representative. Ninety-one usable responses were returned. The data were tabulated and expressed in frequencies and percentages. It was found that the larger the school the more likely a choral program existed as well as a greater variety of performing ensembles. Music was a regular part of the curriculum and was considered as important as other subjects in regard to scheduling. Performing choirs and

general music classes were combined more often than offered separately. Medium size schools exhibited more interest in contests than did small or large schools. The number of out-of-town trips was not indicative of the total choral activity in a school. Larger schools participated more in clinics and festivals than did smaller schools. The use of choir robes and the social functions in choral activities were not thought important by the teachers responding. Current practices in scheduling prevented students from taking more than one music class. (Faculty Advisor: B. M. Bakkegard).

115. Hollingsworth, Beverly J. "A Survey of the Status of the General Music Program in the Junior High Schools of Texas." Unpublished Master's Thesis, University of Texas, 1953. 69 pp. (M.M.Ed.).

A status study was made of the general music classes in the junior high school of Texas. A questionnaire was designed, reviewed, and edited several times by the music education faculty of the University of Texas and by the State Music Consultant. An arbitrary sample was selected which was believed to be representative in terms of school size and geographical location. Of 150 questionnaires sent, 76 (51 percent) were returned. Schools with larger enrollments tended to maintain a more comprehensive general music program than did schools with smaller enrollments. The elective general music program was more common than the required program. When general music was offered on an elective basis, students from smaller schools elected the course more frequently than did students from larger schools. The most frequent activities in general music were unison and part singing, listening to live performances, use of radio and movies, assigned reading and reports. In music theory there was emphasis on key signatures, scales, and chord study with little emphasis on form and analysis, modes, and keyboard experience. (Faculty Advisor: B. M. Bakkegard).

116. Holzhauer, Albert J. "Remininiscence in the Memorization of Instrumental Music by High School Pupils." Unpublished Master's Thesis, University of Cincinnati, 1941. 57 pp. (M.E.).

The phenomenon of reminiscence (the improvement in the performance of a task after a time lapse during which there is no practice on the task) as observed in the memorization of instrumental music by high school music students was investigated in this study. Thirty-six outstanding performers from the band and orchestra of one high school were given 15 minutes to memorize a short original melody. Individual recordings were made after the fifteen minute period and again one day later. The Ohio State Psychological Test, Form 20 and the Kwalwasser-Dykema Music Test were administered to the subjects. The data were analyzed by use of the Spearman rank order correlation standard deviations, percentile ranks, and critical ratios. The ratio of the difference between immediate and delayed melody recall to its standard deviation was found to be significant (CR=3.82). The critical ratio for rhythm was also statistically significant. A majority of the subjects gained from the first attempt at recall to the second attempt. No significant correlations were found between scores on the two standardized tests nor were significant relationships found between musical ability or intelligence on the one hand, and reminiscence on the other for either melody or rhythm. (Faculty Advisor: Gordon Hendrickson).

117. Hughes, Dorothy T. "A Study of Musical Taste of Junior High School Students in Relation to Environmental Influences." Unpublished Master's Thesis, New York University, 1932. 144 pp. (M.A.).

A survey was made of expert opinions and philosophies of the role of music in leisure time activities and to survey the uses made of music in the leisure time activities of junior high school students. A questionnaire was developed from a review of related literature and was distributed to 762 junior high school students from five arbitrarily selected schools. The subjects stated the musical compositions they most frequently listened to and a panel of judges rated these compositions regarding musical quality. All data were tabulated in frequencies and percentages. It was found that emphasis by the school upon certain areas of music generally results in preference for those areas. The

home had considerable influence in encouraging the subjects to study instrumental music. The radio was the most prevalent instrument in the home, surpassing the piano and the phonograph. The greatest part of the musical background observed in the subjects was acquired through the public school. (Faculty Advisor: Vincent Jones).

118. Hutcherson, Rita J. "Group Instruction in Piano: An Investigation of the Relative Effectiveness of Group and Individual Piano Instruction at Beginning Level." Unpublished Doctoral Dissertation, State University of Iowa, 1955. 257 pp. (Ph.D.). (Univ. Micro. No. 55-145).

A comparison was made of music learnings, attitudes, and certain performance skills resulting from group and individual instruction in piano at the beginning level. Twelve children, ages six through nine, were selected to participate in the experiment. The writer attempted to equate the group of six "experimental" students with six "control" students in terms of estimated musical, mental, physical, and social maturity. Measures used included I.Q., verbal reading age, Hutcherson Visual Discrimination Test, and K.D. Test. Estimates by the investigator and other teachers were made of the following variables: manifest interest in music, control of singing voice, motor ability, keyboard potential, index of social maturity. The children having group instruction were designated as the experimental group while those having individual instructions were the control group. Each subject recorded selected compositions which were evaluated by the writer and two competent judges. Non-performance aspects of music achievement were measured by the Kelsey and the Kwalwasser-Ruch tests of musical achievement. No significant differences were found between the two groups. Slight differences in favor of the experimental group were found in (1) knowledge of music rudiments, (2) ability to recognize familiar tunes at sight, and (3) piano sight-reading ability. A small difference was found in favor of the control group with respect to the quality of prepared performance under informal recital conditions. There was a distinct advantage to the experimental method in terms of the teacher's time. The teacher spent a total of 420 minutes instructing the control group (individually), while the experimental group received 210 minutes of instruction. (Faculty Advisor: John Simms).

119. Janszen, Royce H. "The Organization and Administration of Off-Campus Student Teaching in Music at Selected Institutions." Unpublished Project Report, Teachers College, Columbia University, 1962. 356 pp. (Ed.D.). (Univ. Micro. No. 63-2260).

Music student teaching practices and procedures in 376 institutions were surveyed. Of 725 institutions to which questionnaires were sent, 408 replied. Thirty respondents indicated that college personnel visited potential cooperating schools prior to their selection as places of student teachers. Five-sixths of the respondents indicated that the competency of the cooperating teacher was a factor which determined the selection of a school. Twenty-four institutions reported that student teachers had experience in at least two cooperating schools. Seventeen institutions required student teaching on the elementary, junior high and senior high levels. Thirty respondents indicated that admission to student teaching was based on a consideration of multiple factors, such as academic background, maturity, background with children and youth, personal physical traits, and proficiency in the major teaching field. Admission to student teaching was determined by a committee of faculty members in 29 institutions. Twenty-three responses indicated that mutual acceptance between cooperating teacher and student teacher was a factor determining assignment. Twenty-two institutions provided student teachers with literature describing the student teaching program and outlining the procedures to be followed before and during the assignment. Student teachers were visited and observed at intervals of approximately two weeks. Three-fifths of the institutions reported student teaching seminars scheduled on a weekly basis. In 14 institutions, college personnel determined grades while in 13 institutions the cooperating teacher shared in this responsibility. Twenty schools made cash payments to cooperating teachers and two institutions offered in-service training for cooperating teachers. Most institutions preparing teachers of music were classified as liberal arts colleges. (Faculty Advisor: Harry R. Wilson).

120. Jeffrey, Wendell E. "Variables in Early Discrimination Learning: II. Mode of Response and Stimulus Difference in the Discrimination of Tonal Frequencies," Child Dev., 29:4 (December, 1958), 531-538.

The hypotheses in this study were (a) that practice on two separate pre-training tasks involving the production of tones to match the stimulus tones would transfer to the difficult task of pressing the left button after a low stimulus tone and the right button after a high stimulus tone; and (b) that training with a pair of tones separated by 1024 cycles would facilitate subsequent discrimination of a pair of tones separated by only 128 cycles. Twenty-one subjects from one kindergarten were divided into three equal groups. Ages of the subjects ranged from five to six years. Two series of two piano tones were recorded at ten second intervals. In series A the interval between tones was 1024 cycles; in Series B the interval was 128 cycles. Group I was trained only on a programmed button pressing apparatus; Group II was required to match the discriminative stimuli vocally prior to being tested on the programmed apparatus; Group III learned to produce matching tones on the piano before being tested on the programmed apparatus (button pressing responses). Differences in performance on the transfer task (i.e. from vocal or piano reproduction of tones to the programmed response apparatus) were tested for significance by the Fisher exact probabilities test. The hypothesis, that pre-training would be facilitative, was supported. The hypothesis regarding transfer from training with the Series A stimuli, involving a difference of three octaves and a fifth between stimuli, to a closer discrimination of the Series B stimuli (a difference of a fifth) was not supported.

121. Jenkins, Thomas V. "A Study of the Relationship Between Music Aptitudes and Mental Ability, Science Aptitudes, and Mathematics Aptitudes among Secondary School Pupils in Texas." Unpublished Doctoral Dissertation, University of Texas, 1960. 89 pp. (Ph.D.). (Univ. Micro. No. 60-6625).

Correlations between music and non-music students' aptitudes in music, science, and mathematics were sought in this study. The counselors of eight selected secondary schools were given criteria and 256 subjects were chosen accordingly. By use of standardized tests, administered by the investigator, the aptitude of the students was measured in the areas of music, science, and mathematics. Mental abilities measures were obtained from school files. All subjects were of generally higher mental ability than norms. Some discrepancies in equating were evident but these were clearly stated. Two sub-groups were formed from the original group, group I consisting of public school music students, and Group II consisting of non-music students. Correlations were made between the test scores. There was a marked relationship between mental ability and music aptitude for the total group. There was a slightly higher relationship between mental ability and music aptitude for both the music and the non-music group as well as for both groups combined. Only a slight positive correlation was found between music ability and scientific aptitude. No significant differences were discovered between the means of the two groups in mental ability. Pupils' aptitudes in music were increased by training in music, although this was not true in one sub-group from an individual school system. That no significant differences were found between the means of any sub-group in aptitude in science or mathematics indicated that participation in a music organization appeared to have no noticeable effect on aptitudes in either science or mathematics as measured by the tests used in this study. (Faculty Advisor: C. C. Colvert).

122. Jersild, Arthur T., and Sylvia F. Bienstock. "A Study of the Development of Children's Ability to Sing." J. Educ. Psychol., 25:7 (October, 1934), 481-503.

A study was made of the vocal range of young children. Four hundred seven children ranging in age from two to ten years served as subjects. About 90 percent of the subjects came from public schools and nurseries. Sixty-five adults were also included for comparison. The investigators tested each child by having him match pitches produced on the piano. Reliability of the investigators' judgment was determined by correlation with expert judgment. An arbitrary scoring system was devised. The vocal range was

defined as the maximum range - no attempt was made to determine "usable range." A person realizes a large portion of his potential pitch range while he is still in the first three grades of elementary school, especially in the case of girls. Girls had a somewhat larger range than did boys although at no time was the difference between boy's and girl's ranges three times its standard error. Ninety-nine percent of the tones occurred within the range from first line E to fourth space E.

123. Jersild, Arthur T., and Sylvia F. Bienstock. Development of Rhythm in Young Children. New York: Bureau of Publications, Teachers College, Columbia University, 1935. 105 pp.

The ability of young children to keep time to music was measured. Ninety-four children from three nurseries and kindergartens who ranged in age from two to five were chosen as subjects. Seventeen adults were also used. Eighteen children from the same population were used in preliminary studies regarding adequacy and reliability of equipment. Methods were developed for measuring the accuracy with which children can keep time to the accompaniment of an electrically operated piano. Highly complex devices were used whereby neon lights and clocks were attached to the mechanical piano. Motion pictures were taken of each subject in various rhythmic activities at a speed of 24 frames per second. The data from the films were transferred to paper, one frame at a time. On the motion picture film was super-imposed a calibrated clock indicating speed and the flashing lights indicating placement of the beat in the music. A method using a Bristol recorder which activated a pen was discarded in the preliminary study as were many of the originally planned devices. There was a large increase with age from two to five years in children's ability to keep accurate time to the accompaniment of music, and a decided difference between the ability of a five year old and an adult. There was little difference between the child's ability to beat time with his hands and his ability to walk to the accompaniment of music. There was a high degree of correspondence between ability to beat time with the hand and ability to keep accurate time in walking. The child was better able to keep time to music played at the faster tempos. The variable of meter in this study did not affect the subjects accuracy to a material degree.

124. Johnson, Gordon B. "Negative Practice on Band Instruments: An Exploratory Study." J. Res. Music Educ., 10 (Fall, 1962), 100-104.

A comparison was made between the effect of positive and negative practice methods using as subjects a group of 17 randomly chosen high school band members. The study was an attempt to test Dunlap's "beta hypothesis." Two music tests, or practice exercises, were developed from a little known French publication designed for sight reading. Subjects were chosen at random from one high school band. All exercises were practiced five times each with instructions given to each subject as he practiced. At the end of the practice period the subjects were told to play the examination through correctly. Tape recordings of the test were made and errors were analyzed. Errors observed in each method were compared with I.Q. rank but no statistical measures were employed. It was concluded that some students profited more from the use of negative training than other students did. There was an indication that the more intelligent subjects made correspondingly more errors after they had rehearsed incorrectly than did the less intelligent students. Positive practice seemed to be of more value for the type of exercises included in this test, but the use of negative practice cannot be discounted.

125. Johnson, Martin O. "The Philosophies and Attitudes of Selected Music Teachers Toward Music Education." Unpublished Research Study No. 1, Colorado State College, 1961. 257 pp. (Ed.D.). (Univ. Micro. No. 61-6998).

The purposes of the study were to develop a set of philosophical statements and a set of attitude statements, to obtain evaluations from the sets of statements, and to secure personal information from each respondent, which, when projected against the philosophies and attitudes of all respondents, would allow for greater evaluations of

present practices. Philosophy and attitude statements were extracted from theoretical writings in music education and formed into a preliminary instrument which was pretested in a pilot study. Subjects were chosen arbitrarily from three MENC regions. The questionnaire, consisting of Q-sort cards, instructions, and a tally sheet were sent to 362 music teachers of high school and college levels; 142 were returned. Frequencies and percentages were used in analyzing the responses to the philosophic and attitude statements. The music supervisors, while not displaying extremely high percentages of consistency, were more consistant than high school or college music educators. The instrument used in this study did not register any strong agreement, unity, or consistency between high school music teachers, music supervisors, or college-university music teachers toward music education. (Faculty Advisor: E. E. Mohr).

126. Jones, Donald W. "A Comparative Study of Selected Issues in Music Education as Represented in the Opinions of Principals, Music Teachers, and Professors of Music Education." Unpublished Doctoral Dissertation, The Ohio State University, 1961. 283 pp. (Ph.D.). (Univ. Micro. No. 62-779).

The purposes of the study were: (1) to discover the degree of agreement and disagreement in relation to selected issues in music education as reflected in the beliefs of high school principals, high school music teachers, and college teachers of music education, and (2) to determine the degree of similarity and dissimilarity between the "ideal" situation thought desirable by the above groups and the "actual" practices in the schools. A questionnaire was developed, and a pilot study was made to evaluate the instrument. The final questionnaire was sent to stratified random sample of 217 principals and 377 music teachers. Questionnaires were sent to the entire population of 116 college professors of music education. A 69 percent return of questionnaires was received from the sample. Chi square tests were performed to determine the presence of statistically significant differences among the three groups of respondents, between the "ideal" and "actual" practices in the schools. The three groups of respondents were found to differ significantly with regard to the desired "ideal" in 19 of 20 issues, while, with regard to the "actual practice," they differed significantly in 17 of 20 issues. A significant difference of opinion was expressed by the music teachers and the principals on the desired "ideal" solution of 17 of the 20 issues investigated. A significant difference of opinion was expressed by the music teachers and the college teachers in relation to the desired "ideal" in 9 of the 20 issues. College teachers were found to be more dissatisfied with the existing practices than were high school principals and high school music teachers. (Faculty Advisor: William B. McBride).

127. Joseph, Warren A. "The Relationship Between Vocal Growth in the Human Adolescent and the Total Growth Process." Unpublished Doctoral Dissertation, Boston University, 1959. 184 pp. (Ph.D.). (Univ. Micro. No. 59-3467).

An attempt was made (1) to establish a basis for determining norms, means, and extremes of voice range and (2) to determine expected incidence and degree of mutation from a simple voice test and from school health records. The subjects were 907 students in the public schools of Brookline, Massachusetts. The data were obtained from school records; other data, including an appraisal of general biotype, were obtained by interview. Ratings of the number of erupted permanent teeth and vocal range were checked for reliability. Subjects ranged in age from 11 through 18 years. It was found that both before and after the onset of puberty, as age and overall size of body structure increased, voice range lowered for both sexes. Before age 15 years and four months the development patterns were less clearly discernable than from that age onward. The distribution of low terminal pitch for both sexes centered around the F sharp of their respective ranges. A large number of subjects produced isolated overtones. The high terminal pitch was, in all except four cases, related to the low terminal pitch in that both were overtones of a harmonic series built upon a fundamental tone one octave below the low terminal pitch. The first child in a family of more than three children evidenced a restricted voice range. A repeated occurrence of wide voice range in subjects who, through their medical histories, evidenced sensitive upper respiratory areas was paralleled by the positive relationship

between lack of childhood upper respiratory infection and restricted vocal range. (Faculty Advisor: Jack O. Lemons).

128. Kaplan, Lionel. "The Relationship Between Certain Personality Characteristics and Achievement in Instrumental Music." Unpublished Doctoral Dissertation, New York University, 1961. 195 pp. (Ph.D.). (Univ. Micro. No. 61-2553).

A study was made of the possible relationships between personality characteristics and achievement in instrumental music. The Manifold Interest Schedule was administered to random samples of 300 band students and to 300 non-band students from six New York City Public High Schools. The Watkins-Farnum Performance Scale was administered only to the band students. The sample of band students was later stratified by instrument played. Chi square and t tests were applied to the scores (transferred to stanine scores) and differences in music/non-music personality patterns were tested for significance. The findings indicated that certain personality characteristics were associated with students who studied music, who played a specific type instrument, and with the relative degree of achievement attained in the study of band instruments. While levels of significance did not exceed the .05 level for any of the above findings the writer stated that the probability that a student will fall into a profile which serves to distinguish music from non-music students is 32 in 100. (Faculty Advisor: Louis E. Raths).

129. Keiser, Grace F. "The Musical Achievement of Two Classes in Junior High General Music Taught by Two Different Methods." Unpublished Master's Thesis, University of Kansas, 1957. 190 pp. (M.M.E.).

A study was made of the relative effects of two teaching methods ("choral" vs. "experimental") upon attitudes toward music as well as interests and achievement in music, as measured by selected tests. Two groups of seventh grade students were matched on the basis of mean intelligence scores and teacher ratings of general ability. They were pretested by the Gaston Test of Musicality, the Keston Test of Musical Preference, and a teacher-constructed test of musical achievement. One group received choral instruction while the other engaged in various activities such as singing, playing the autoharp, games and dances, toy orchestra, arranging music for the toy orchestra, and listening. Post-tests were administered. There was a definite improvement in the ability of both groups in the recognition of familiar themes in musical notation. The music interests of the experimental group, as measured by the Gaston Test of Musicality, increased during the semester. The slight gain in interest of the choral group was not significant. No statistical significant difference was observed for either group in the appreciation of "good music." Both groups showed highly significant increases in their performance on the teacher-constructed music achievement test (knowledge about music). (Faculty Advisor: Marcus E. Hahn).

130. Kelly, William L. "Beliefs and Practices of Administrators and Musicians from Selected Midwestern Cities Concerning the Importance and Function of Music in the Public Schools." Unpublished Doctoral Dissertation, University of Kansas, 1962. 164 pp. (Ed.D.).

An interview technique was used to ascertain the degree of agreement between the stated beliefs of superintendents, principals (elementary and secondary), music supervisors, and music teachers regarding the importance and functions of music in the public schools. The beliefs tested were structured into five categories as follows: (1) aesthetic development, (2) development of skills, (3) functional contribution, (4) social development, (5) democratic living. Responses in those major areas were judged by the interviewer to be "very favorable," "favorable," or "ambivalent." Personnel from school systems in five midwestern cities with populations ranging from 75,000 to 250,000 were interviewed including one superintendent, ten principals, ten music teachers, and one music supervisor. After chi squares were applied to the data, it was found that there were no statistically significant differences between the beliefs of the administrators

and the music teachers who were interviewed. A significant difference was found between the secondary school principals and music teachers and the elementary school principals and music teachers with the latter two groups having a better understanding of the function of music in the schools. Many secondary teachers were found to be acting contrary to their stated beliefs by overemphasizing public performance skills. (Faculty Advisor: E. Thayer Gaston).

131. Keston, Morton J. "An Experimental Evaluation of the Efficacy of Two Methods of Teaching Music Appreciation." J. Exp. Educ., 22 (March, 1954), 215-226.

The purpose of this study was to provide an experimental basis for judging the relative superiority of two different points of view in the teaching of music appreciation. Eighty-nine high school students were randomly divided into experimental and control groups for instruction in music appreciation. The control group only listened to music while the experimental group listened, heard explanatory comments, and discussed the music. A zero control group (a choir) was established in a second high school. The author developed and performed validating procedures upon a Test of Musical Preference, and a Test of Music Recognition. Other factors measured were musical accomplishment, musical training, musical discrimination, pitch, tonal memory, rhythm, I.Q., grade-point average, and socio-economic status. The data were analyzed by analysis of variance and covariance. The analysis of the final preference test scores, with the initial preference test scores held constant, revealed that there was a significant difference between the means of the experimental and control groups. Ten additional analyses of variance and covariance were performed on the preference test scores with both the initial preference test scores and each of the 10 independent variables held constant. In every case, a significant difference was found between the means of the experimental control groups on the final preference test scores. It was concluded that the method of instruction in music appreciation which utilized commentary and discussion aimed to develop appreciation in conjunction with listening to music is superior to the method of instruction in which music is listened to without comment.

132. Kiely, Dennis K. "An Evaluation of the Competencies of Beginning Elementary Classroom Teachers in Music Theory and Singing in Various Teacher-Training Institutions of New England." Unpublished Doctoral Dissertation, Boston University, 1956. 206 pp. (Ed.D.). (Univ. Micro. No. 56-2297).

An investigation was made concerning the competencies demonstrated by beginning classroom teachers in music theory and singing. Eight colleges in New England were selected on the basis of size and an attempt was made to distribute them proportionately in terms of being public or private schools. From these institutions 396 college seniors majoring in elementary education were considered "beginning teachers." The investigator constructed a rating scale (based on an investigation of textbooks and manuals) for administration to 36 music educators. These authorities rated each of several competencies with respect to their essentialness for elementary teachers. The Kotick and Torgerson Diagnostic Tests of Achievement in Music were administered to the 396 students and an additional test was constructed and validated by the investigator to cover areas of competency not included in the published test. A singing test was developed by the writer and a random sample of 127 of the students was selected for the administration of the test. A jury of ten members rated the recordings of the singing test. Statistical treatments included item analysis, measures of reliability, and correlations. With respect to the criteria established by the panel of educators, achievement in music theory by the elementary classroom teachers was not adequate. As a group, the teachers gave evidence of almost achieving a desired level of singing. These beginning teachers demonstrated little ability in reading "new" vocal music. The writer concluded that in this respect the effective and independent teaching of music in the self-contained classroom did not seem to be possible at that time (1956). (Faculty Advisor: B. Alice Crossley).

133. Kingsbury, Charles L. "Harmony Skills Used by Selected High School Instrumental Music Teachers." Unpublished Doctoral Dissertation, Indiana University, 1945. 166 pp. (Ed.D.).

A survey was made of the extent to which harmonic knowledge and skills are used by a select group of high school orchestra and band directors in preparing compositions for rehearsal, conducting rehearsals, altering instrumental parts, arranging compositions, and composing music for orchestra and band. A check list was designed (modeled after S. T. Burns' Dissertation, Columbia University, 1945). A total of 1,084 check lists were sent to outstanding instrumental directors, whose names were submitted by state and city superintendents of public instructors and college music administrators throughout the United States. Returned usable checklists totaled 744. The data was presented in percentages with Garrett's significance of percentages being applied. Silent study of the score was the technique used most frequently for rehearsal preparation by 93 percent of the subjects. The use of the piano ranked second as a device for obtaining a concept of the harmony. With regard to specific practices, the following were found: 84 percent of the respondents reported making alterations of instrumental parts during rehearsals; 75.8 percent reported occasionally writing parts not provided in compositions; 56.9 percent had not written a band or orchestra composition during the past year and only 14.7 percent had written three or more compositions during the past year; of 687 respondents, 30 percent reported making no band arrangements. The most frequent composition types for which arrangements were made were: school songs, hymns, folk tunes, patriotic songs, and solo accompaniments. (Faculty Advisor: S. T. Burns).

134. Klein, Arthur F. "Elementary Teachers' Judgments Regarding the Adequacy of Their Music Preparation." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1955. 178 pp. (Ph.D.). (Univ. Micro. No. 56-209).

A survey was made to ascertain whether the required music education courses taken in college by prospective elementary teachers adequately establish for them musical competencies needed for classroom teaching in Tennessee. A questionnaire was constructed, pretested (judgment items yielded a reliability from .38 to .93), and sent to 483 recently certified elementary teachers in Tennessee. Returns were received from 276 (58 percent). The returns were tabulated for the frequency of use of each activity, and for the teachers' estimate of the quality of musical competence which they gained in their required college music education courses. Approximately three-fourths of the teachers responded that they did music teaching. Only eight percent of the respondents had the services of a special music teacher. Approximately half of the teachers reported that daily music instruction was provided for their students, with the average period being 22 minutes in length. When participants were classified (into three groups) according to the amount of their musical training, positive correlations greater than .90 were obtained when the training was compared to their reported use of various music teaching activities. The teachers reported poor competency both in singing and in piano playing. Two-fifths reported the necessity for "outside" help when learning a song, and only 14.5 percent reported the ability to play any musical composition suitably for their pupils. More than three-fifths of the teachers indicated that they had received no help in playing the piano as a part of college courses, while more than 14 percent reported no help in learning to sing during these courses. (Faculty Advisor: William H. Vaughan).

135. Kuhn, Wofgang E. "A Study and Appraisal of Music Education in Selected Public Schools of Illinois." Unpublished Doctoral Dissertation, University of Illinois, 1953. 220 pp. (Ed.D.). (Univ. Micro. No. 5983).

The status of music in approximately one-fourth (236) of the public schools in Illinois was determined prior to an evaluation of practices observed. The evaluation was made in terms of music education's function in and contribution to the program of general education. The data were obtained by use of a three-part questionnaire which had been pre-tested and refined prior to being administered. The classroom teacher taught his own music in about half of the elementary schools studied; about one-third of these teachers were supervised in music. About 35 percent of the elementary schools of the sample participated in music contests and 45 percent participated in music festivals. Unified school districts, as a rule, offered more varied and complete music activities than separate elementary schools. Unit district high schools of the sample showed higher percentages of student enrollment

in music than separate high schools. Small high schools showed higher percentages of student enrollment in music than large high schools. Higher per capita cost high schools showed higher percentages of student enrollment in music than low per capita cost schools. The music curriculum of the high schools of the sample was almost exclusively organized around selective performance groups. Very few orchestras were found in the high schools. Generally, fractional credit was given for music instruction in the high school, allowing one or two full units of music work to count toward graduation. Music instruction was generally open to all students in grades 9 through 12 on an elective basis. Vocal music and band were the most common areas of undergraduate specialization among music teachers of the sample. About one-third of the teachers had masters degrees and 15 percent had no degrees. The mean salary of the music teachers was $3,400. The full-time music supervisor was practically non-existent outside of metropolitan areas and the duties of the supervisors found were very loosely defined. (Faculty Advisor: Edwin H. Reeder).

136. Kyme, George H. "Are Musical Tastes Indicative of Musical Capacity?" J. Res. Mus. Educ., 4:1 (Spring, 1956), 44-51.

The purposes of the study were (1) to discover measurable factors of music which in themselves constitute the end products of the integration of these elements of music (pitch, timbre, loudness, and duration) into meaningful wholes, and (2) to devise a test of musical capacity which could measure this ability to integrate. A preliminary "Test of Esthetic Judgment of Music" was constructed. The test was composed of paired performances and was administered to "musical" and "unmusical" members of a high school band. The musical abiiity of the subjects was rated by three judges (music teachers). Students in the extreme quartiles of the band were chosen as subjects. Teacher ratings and performance on the initial test correlated highly. Items not sufficiently discriminating were rejected. Test items were pairs of recorded performances involving problems of intonation and problems of tone quality. Music recorded at a state solo contest was used in the test of tone quality. The revised test was then subjected to a validity check similar to the check used on the initial test, except that subjects included band, orchestra, and choir personnel from a high school, as well as music education classes at the University of California. Validity coefficients were obtained. The universality of the conclusions requires further investigation. Esthetic judgments, functioning as organizing factors of auditory images, may be used to differentiate between persons known to be musical and persons observed to be less musical. The study indicated the methodology appropriate to the construction of a predictive instrument in this area. There was evidence that the best prediction of musical behavior must be based upon observation, that is, the assessment of music at its true value by the individual in the light of his experience, is worthy of more consideration than has been previously given.

137. Kyme, George H. "An Experiment in Teaching Children to Read Music with Shape Notes." J. Res. Mus. Educ., 8:1 (Spring, 1960), 3-8.

A comparison was made of the effectiveness in several approaches to music reading in the elementary school, including one making use of shape notes. The subjects were 183 fourth and fifth grade students from varying socio-economic backgrounds in the San Francisco Bay area. Control and experimental groups were selected in each school. Identical teaching materials and their order of presentation were maintained. The instructional period was 15 class meetings of 30 minutes each. In one experimental situation, the same teacher taught both groups. In a second situation, one teacher substituted the solfege method for the traditional method. A third experiment involved the testing of the effect of mixing the teaching techniques. Sight reading ability was defined and criteria were established for evaluating the tape recordings of the final sight reading test. Since there was no statistical significance in the difference of the sight singing pre-test means for any of the equated groups, it was assumed that the groups were drawn from the same musical population. Results of the final sight reading test revealed that the groups subjected to shape note instruction were significantly superior to the control groups in each of the four paired situations at the .01 level. A regression was observed in the progress of the group taught by the solfege method. Students in the experimental groups were the only ones to develop skill in notating their own created melodies.

138. Lamp, Charles J. "The Determination of Aptitude for Specific Musical Instruments." Unpublished Doctoral Dissertation, University of California at Berkeley, 1933. 84 pp. (Ed.D.).

A statistical evaluation was made of certain tests, measures and empirical rules considered to be valuable in the prediction of aptitude for performance on musical instruments. The subjects were 62 beginning instrumental music students from one high school. I.Q. scores were obtained and the group was pre-tested using the Seashore battery. Photographs were made of the students' dental formation and measurements were made of lip thickness and taper of fingers. Each student began the exploratory class by playing the instrument of his choice for a try-out period. Method books were constructed. Performance and aptitude tests were constructed, validated, and administered. Neither the mental tests nor the physical measurements yielded a valid prediction to serve as a basis for the selection of instruments most suitable for individual students. The controlled tryout method proved to determine instrumental aptitude with a high degree of accuracy. A correlation of .33$\pm$.070 was found between I.Q. and brass instrument performance. Brass performance correlated more highly with pitch discrimination (.52$\pm$.068) and with tonal memory (.48$\pm$.080). The partial correlation between lip thickness and mouthpiece diameter, with brass performance held constant was only .275. Evenness of teeth showed no significance for any of the types of instrumental performance investigated. The relation of finger taper to string aptitude was too small for either statistical or practical significance (.17$\pm$.095). There was, however, a significant relationship between performance on the string and woodwind instruments (.72$\pm$.053), due perhaps to the presence of such common elements as digital dexterity. (Faculty Advisor: Noel Keys).

139. Lamp, Charles J. and Noel Keys. "Can Aptitude for Specific Musical Instruments Be Predicted?" J. Educ. Psychol., 26:7 (November, 1935), 587-596.

The purpose of this study was to determine comparative aptitude for three different types of musical instruments through a system of controlled exposure, or tryout instruction, followed by objective measures of attainment. The subjects were 151 high school students (who had had no previous instrumental music experiences) in four successive classes in one high school. Pre-tests and measurements were made of the following for prognostic use: I.Q., pitch discrimination and tonal memory (Seashore Test), eveness of teeth, length and slenderness of fingers, and thickness of lips. Experimental exploratory classes were then given. Sight-reading tests were constructed and administered (Reliability .95-.97$\pm$.009; validity .78$\pm$.026-.87$\pm$.016). Correlations were run between the predictive factors (I.Q. pitch, etc.) and degree of success on brass, woodwind, and string instruments. Neither pitch perception nor tonal memory, as measured by the Seashore Tests, afforded an index of aptitude for brass, woodwind, or string instruments which was adequate for individual guidance. The Terman group I.Q. Test had even less predictive power. Teeth evenness and length and slenderness of fingers showed no significant relationship with achievement on any type of instrument studied. There appeared to be some agreement (r=.28) between thickness of lips and diameter of the mouthpiece of the brass instrument on which an individual is most likely to succeed. A combination of scores on pitch discrimination, tonal memory, and I.Q. was found to predict performance on brass instruments sufficiently well (r=.58) to be of some assistance in guidance. No combination of tests obtained served to forecast success on clarinet or violin with a correlation higher than .42.

140. Landon, Joseph W. "Music Supervision in California City Schools." Unpublished Doctoral Dissertation, University of Southern California, 1959. 895 pp. (Ed.D.). (Univ. Micro. No. 59-1851).

The purposes of this study were to determine: (1) the activities in which California city school music supervisors engage, (2) the relative emphasis placed on these activities, and (3) the relative value of these functions. Questionnaires were sent to all California city school systems of 5,000 A.D.A. and over, who had agreed to participate, and to a nation-wide group of music education specialists. Of those who agreed to participate, returns were received from 64 music supervisors (97 percent), 57 school

administrators (83.9 percent), and 59 nation-wide music specialists (95.2 percent). Personal interviews were conducted with 26.6 percent of the music supervisors. The data were presented and analyzed by means of percentages, rank order correlations, and critical ratios. Activities performed by 100 percent of the responding supervisors included (1) classroom visitations and conferences with teachers and principals; (2) offering of constructive criticism with regard to the organization and management of music classes; (3) serving in an advisory capacity to principal and staff committees; (4) promoting continued revision of the music curriculum and organizing courses of study, units, and teaching guides; and (5) regularly reading of professional literature and conference attendance. The investigator lists in rank order of importance (1) major areas of importance in terms of the emphasis indicated by the supervisors; (2) the administrators' judgments as to the relative value of various supervisory activities; and (3) the music specialists' judgments as to the value of these activities. The areas of greatest disagreement among the ratings of music supervisors, school administrators, and music education specialists were those of research and evaluation and community leadership and public relations. (Faculty Advisor: Ralph Rush).

141. Lawson, Gerald L. "The Status of Music in Iowa High Schools." Unpublished Doctoral Dissertation, State University of Iowa, 1960. 116 pp. (Ph.D.). (Univ. Micro. No. 60-5672).

A status study was made of high school music instruction in the 374 public school districts of Iowa maintaining high schools with an enrollment greater than 100 during the year 1959-60. A questionnaire was constructed and checked for ambiguities by a jury of experts. The questionnaire was sent to administrators and music teachers in each of the 374 public school districts of Iowa. Returns were received from 282 high school administrators and 543 high school music teachers. Frequencies and percentages were used in analyzing the data. Most music instruction occurred within the school day and was selective in nature. Only 19 teachers reported string instruction in the public schools and only 16 high schools reported a full string orchestra. Music theory and appreciation courses were very limited in number and there were no courses reported in music history or composition. Fifty-seven percent of all Iowa high school students did not participate in any sort of music activity. Three percent of Iowa music teachers surveyed did not have a major or minor music emphasis in their undergraduate preparation. Solo and Ensemble activities sponsored by the State School Music Association was the most widely utilized activity. The majority of teachers surveyed were responsible for either the vocal or instrumental department but not both. Less than 20 percent of music teachers were responsible for both areas of instruction. Findings reported from the opinion portion of the questionnaire are inconclusive because the opinion statements were not tested prior to administration. (Faculty Advisor: Neal Glenn).

142. Lease, Gus C. "A Study of the Musicality, Intelligence, and Music Achievement of Vocalists and Instrumentalists in Selected High Schools." Unpublished Doctoral Dissertation, State University of South Dakota, 1959. 165 pp. (Ed.D.). (Univ. Micro. No. 60-810).

A study was made of the differences between instrumentalists and vocalists in intelligence, musicality, and music achievement of seniors enrolled in public school music in selected high schools. From seven arbitrarily selected midwestern high schools, 150 instrumental and 150 vocal music students were selected. The pitch, rhythm, and tonal memory sections of both the Seashore Measures and the K-D Test were administered to the subjects, as were the Drake Musical Memory Test and the School-College Ability Test (SCAT). Correlations and analysis of variance tests were computed between and among the various test scores after the population had been divided into sub-groups according to instrument played and sex. Only the quantitative section of the SCAT produced significant differences between vocalists and instrumentalists, the latter scoring higher. The instrumentalists also were found to be significantly superior in the following measures: Seashore pitch and tonal memory tests, K-D rhythm and tonal memory tests, Drake Music Memory Test, and the K-R Test of Musical Accomplishment. No significant differences were found between the instrumental sub-groups on any of the tests except the K-D rhythm

test in which the stringed instrument sub-group scored significantly higher. Positive but low correlations were observed between the scholastic aptitude test and the individual music tests. (Faculty Advisor: Joseph T. Fisher).

143. Lebow, Mary R. T. "University Organization for the Undergraduate Education of Music Teachers." Unpublished Doctoral Dissertation, Wayne State University, 1960. 367 pp. (Ed.D.). (Univ. Micro. No. 60-2330).

A survey of universities similar in organization to Wayne State University was made for the purpose of determining present practices in the training of certified school music teachers and to establish areas in which the effectiveness of the administration of the curriculum for the undergraduate preparation of certified school music teachers might be increased. Eight categories of printed sources, letters of inquiry, and personal correspondence were employed in establishing evaluative criteria. Personal visits were made to some of the institutions studied. Curricula from the various universities were then analyzed. It was found that these were 56 large American universities of comples administrative organization comparable to Wayne State University. The data were analyzed in frequencies and percentages. All of the universities, studied had autonomous colleges of education and autonomous colleges of arts and sciences (liberal arts). Course offerings studied showed that the following distribution: liberal education courses - 39 percent, professional education courses - 21 percent, and specialized education courses - 46 percent. There was very little deviation from M.E.N.C. - N.A.S.M. - A.A.C.T.E. curriculum standards. None of the universities were more than one percent below the standards and 24 curricula were not below the standard at all. Universities having autonomous schools of music had the greatest percentage of curricula showing the highest conformity to standards. Universities having autonomous schools of music which were given the major responsibility for the administrative practices appeared best to meet the criteria as developed by the investigator for the evaluation of the content of the undergraduate curriculum for the preparation of certified school music teachers. (Faculty Advisor: Robert M. Magee).

144. Livingstone, Jane C. "A Study of the English Madrigal and Its Use in the High School Vocal Program." Unpublished Master's Thesis, New England Conservatory of Music, 1957. 91 pp. (M.M.E.).

An analysis was made of available English madrigals for the purpose of selecting those suitable for use in the high school. The criteria used were those dealing with range, tessitura, and appropriateness of text for high school students. When range or tessitura problems could be solved by transposition of the composition to another key, such suggestions were made and the composition was included. The investigator found 87 madrigals, by 25 composers of the English Madrigal School, which met his criteria. The madrigals were in the following voices: SS(5), ST(1); SSA(22); SST(7); SSB(1); SAT(2); AAB(1); SSSA(1); SSAA(2); SSAT(2); SSAT(2); SSAB(7); SATB(10); SSAAB(1); SSATB(18); SSTBB(1); SAATB(3); SATTB(1). These madrigals were found to be available in published octavo form. (Faculty Advisor: Leta F. Whitney and Carl McKinley).

145. Lotzenhiser, George W. "An Analysis and Evaluation of State Courses of Study in Music with Special Reference to Instrumental Music." Unpublished Doctoral Dissertation, University of Oregon, 1956. 224 pp. (Ed.D.).

An analysis and evaluation was made of the state courses of study for music which were available during 1954-1955. More specifically the study was designed to seek information concerning the inclusion of guidance material for instrumental music. Twenty-seven states returned courses of study concerning the development and guidance of instrumental music using selected authoritative writings dealing with curriculum planning and course of study construction, (a check list was developed for the analysis and evaluation). The courses of study were evaluated on a five point scale for each item on the check list, and were analyzed and evaluated in terms of the following general areas: physical features, philosophy, general objectives, specific objectives, organization and

content, teaching procedures, measurement and evaluation, bibliographic materials, continuing revision, and basis of formulation. With regard to the ratings received in each of the above criteria areas, the strongest item pertained to the function and responsibilities of individuals and committees producing the courses of study. The weakest item was the provision for measurement and evaluation of the aptitudes and achievements of individuals and groups. There was an increase in the number of state course of study publications for the guidance of music educators in the public schools. Guidance materials in the courses of study in music were inadequate. It was suggested that the physical features of the courses of study should be designed with such flexibility that continuing revision is practicable. (Faculty Advisor: Robert E. Nye).

146. Ludwig, Merlin A. "Current Practices and Problems in Scheduling Co-Curricular Activities in Public Secondary Schools in the Midwest." Unpublished Doctoral Dissertation, State University of Iowa, 1962. 355 pp. (Ph.D.). (Univ. Micro. No. 63-943).

A status study was undertaken to survey and evaluate the practices and problems in scheduling co-curricular activities in public secondary schools of selected midwestern states. The sample was limited to public secondary schools in Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota and Wisconsin. All schools were members of the North Central Association of Colleges and Secondary Schools. A total of 263 high schools were included in the sample of which about one-half were in the State of Iowa. Sampling in the other eight states was stratified by geographic location and by school enrollment. From the cooperating schools to which questionnaires were sent, 61 were chosen (by stratified sampling over the entire nine state area) for visitation. During visits by the writer to the 61 schools, questionnaires were completed by 681 teachers, 153 parents whose children were then enrolled in public secondary schools, and 3,133 high school students who were selected at random. The data were grouped under nine co-curricular activities. All schools studied offered some type of music activity in their program. All schools scheduled band, almost 99 percent scheduled chorus, 83 percent scheduled glee club, and 37 percent scheduled orchestra. When data from the strata of school populations were compiled, it was evident that as the school enrollment increased so the 50 percentage of schools which scheduled orchestra also increased. In about 70 percent of all the schools studied, the music programs were scheduled during the school day. The smaller schools made extensive use of the activity period for music. In about 52 percent of the schools music instruction was scheduled daily. (Faculty Advisor: L. A. Van Dyke).

147. Luke, Orral S. "Differences in Musical Aptitude in School Children of Different National and Racial Origin." Unpublished Doctoral Dissertation, University of California at Berkeley, 1939. 160 pp. (Ed.D.).

The purpose of the study was to discover possible racial and national differences in musical aptitude between five groups totaling 493 seventh grade children of Northern European (English, German, Swedish, Irish, French, Danish, Russian, Dutch, Scotch, Norwegian, and Finnish), Chinese, Japanese, Italian, and Portugese-Spanish descent. A questionnaire was used to determine home musical environment and the following tests were administered to each subject: Drake Test of Musical Memory, The Oregon Discrimination Test and the pitch and tonal memory sections of the Seashore battery. The Terman group test was used for obtaining I.Q. scores. The data were subjected to correlations and the critical ratio. It was found that differences between boys and girls for all nationality groups were very small except in the case of Italian girls who appeared to be musically superior to Italian boys. Comparable Japanese, Northern European, and Portugese-Spanish children appeared equally endowed in basic musical traits. A superior performance in the pitch discrimination test for the Northern European groups as compared to the Chinese and Italian groups was indicated. Greater variability was found within each national group than between the groups. (Faculty Advisor: Luther C. Gilbert).

148. Lustre, Warren W. "An Experiment Comparing Three Methods of Learning Selected Aural Harmonies." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958. 148 pp. (Ed.D.). (Univ. Micro. No. 59-1718).

A measurement was made of learning which resulted from three different approaches to the acquisition of harmonic skills, namely, chords as separate units, chords as related to the composition from which they were drawn, and an eclectic pedagogy encompassing the two previously mentioned methods. Sixty volunteer students ranging in age from 14 to 18 years and from the same public school system comprised the subjects of the study. They were divided into three groups after being equated on a tonal memory variable as measured by that portion of the Seashore tests. Each group was subjected to a different pedagogy of aural ear training. I.Q. scores obtained before the experiment were found to be similar between groups. The subjects had never received aural ear training and had received similar public school music training. The groups were also found to be well-distributed regarding past musical experiences. Instruction was given by means of a tape recorder with the investigator present to answer questions. The instruction period was 35 days with periodic "immediate recall" tests interspersed. Items used in the instruction were selected by use of rather broad criteria. The treatment-by-levels analysis of the immediate recall data in each series revealed that these groups did not differ significantly from each other in mean number of correct identifications of the studied progressions. Analysis of the delayed recall data in each series, revealed that the group which had received training in chord progression training out of context was significantly superior to the other groups. Any inference drawn from the findings in relation to other subjects or groups must be so drawn as to take the recognized variables into serious consideration. (Faculty Advisor: Irving Wolfe).

149. McCaslin, Richard E. "A Study of Extra-Curricular Activities in Three Secondary Schools of Baltimore County." Unpublished Doctoral Dissertation, University of Maryland, 1958. 173 pp. (Ed.D.). (Univ. Micro. No. 58-2220).

A study was made of the status and effects of extra-curricular activities which caused pupils to miss portions of the regular school day. Three high schools were selected for the study, their selection being based upon student and parent educational and occupational factors, and community size, location, and zoning. Data were obtained for 265 eleventh grade students. Personal data were collected from school records and the students kept records of the times they missed scheduled classes to participate in extra-curricular activities. Standardized history and mathematics achievement tests were used to measure the loss in learning due to classes missed as a result of extra-curricular activities. Pupils who missed classes in order to participate in extra-curricular activities were generally those who tended to have higher I.Q.'s, higher grades, higher achievement test scores, more participation in after-school activities, and a tendency toward fewer absences. Activities requiring students to miss scheduled classes most frequently were music, driver education, sports, student council, decoration for dances, school clerical work, art, drama, and journalism in that order. (Faculty Advisor: James Avastroll).

150. McCauley, Clara J. "Courses of Study: Grades I through VIII." In A Professionalized Study of Public School Music. Knoxville, Tennessee: Jos. E. Avent, 1933, 313-592.

A survey was made to ascertain and to report prevalent practices as indicated in the courses of study for public school music in representative school systems of the United States. The author analyzed courses of study from 40 cities, 25 states, and 5 counties, in terms of aims, results, subject-matter, techniques, etc. The statements of aims, results, etc. were taken from the Music Supervisors' National Conference Research Council Bulletin No. 1 and from the courses of study analyzed. The extent of agreement among the courses of study was expressed in frequencies. The findings were not summarized, nor were conclusions drawn. The analysis consists of information in the following categories: specific aims of each grade level, results expected to be accomplished at each level, subject matter materials and activities, and the techniques of procedure.

151. McCorkle, Thomas S. "Recent American Educational Theories on the Place and Function of the Fine Arts in the Public School Program." Unpublished Doctoral Dissertation, University of Texas, 1942. 298 pp. (Ph.D.).

A compilation of representative opinion was made concerning the function of the fine arts in education from the current literature in the fields of educational psychology, methodology, and curriculum making, and educational philosophy. American psychologists (e.g. W. James, Thorndike, Judd) have theorized on (1) the measurement of capacity, (2) the probable relationship between heredity and talent, and (3) emotional development. The child must be educated in terms of his measured capacities but there are areas, such as dance, which are not measured. Emotional development is a point of ambivalence between a science of aesthetics and philosophy. Psychologists do not agree on methodology for the social, moral and aesthetic outcomes on which they do agree. The theorists in methodology and curriculum making generally fall into two groups --- essentialists (Morrison) and progressivists (Dewey). All agree that mere association with the arts is not enough but that a disciplinary and intellectual approach is necessary. Yet the prolific expansion of theory and materials has not improved the public's taste in the requirements for artistic products. It may be that moral and social efficacy of the arts is a misconception or adequate means of approach have not been found. Educational philosophers have found little agreement in the stategy of disciplinary design and its psychological basis. Generally such philosophers (e.g. Horne, Dewey, Washburne) have given little specific thought to the function of the fine arts in the schools, other than its moral, social and cultural potentialities. (Faculty Advisor: Frederick Eby).

152. MacOwan, Thomas D. "Pressures that are Brought to Bear Upon Certain Activities of the Public Secondary Schools of Indiana by Nonschool Affiliated Adult Interest Organizations." Unpublished Doctoral Dissertation, Indiana University, 1955. 222 pp. (Ed.D.). (Univ. Micro No. 55-1004).

The investigator sought to determine to what extent non-school affiliated adult interest organizations affect certain activities of the public secondary schools of Indiana. A questionnaire was constructed, refined, and mailed to the 728 secondary school principals in Indiana who were affiliated with the N.A.S.S.P. Returns were received from 429 principals. (Only the findings relevant to music education are included here.) The principals of 89 schools reported that their bands participated as marching bands at the Indiana State Fair. Eighty-four percent of these bands spent school time in preparation for the event, while 75 percent spent school time both in preparation and participation. Seventy percent of the principals considered this activity to be of value to the students and only three percent considered it to have no educational benefit to the student. The principals of 65 percent of the schools whose bands participated in marching bands at the state fair believed the event had sufficient educational benefits to justify continuance. Principals of 55 percent of the schools reported that they could not refuse to authorize this participation without fear of repercussion. (Faculty Advisor: Otto Hughes).

153. Manor, Harold C. "A Study in Prognosis: The Guidance Value of Selected Measures of Musical Aptitude, Intelligence, Persistence, and Achievement in Tonette and Adaption Classes for Prospective Instrumental Students." J. Educ. Psychol., 41:1 (January, 1950), 31-50.

The purpose of the study was to determine the prognostic value of selected measures of musical aptitude, intelligence, persistence, and achievement in tonette class and adaptation classes as revealed by a special technique in guiding fourth grade pupils into instrumental music classes. The Seashore test battery and the California Elementary Intelligence test were administered to students in 24 arbitrarily selected fourth grade classes from six cities. Students also were ranked in the Manor Persistence Ranking Scale. The experimental period included 8 weeks of tonette instruction; an adaptation class in violin, clarinet, cornet, trombone, and drum; and 14 weeks of instruction on one of the above instruments which was chosen by the student. Achievement tests, validated by expert opinion, were administered throughout the experimental period. In addition

to the Sperman-Brown technique for determining test reliabilities, chi square, analysis of variance intercorrelation, and quartile loadings were used as statistical tools. Students were discarded or retained as a result of the analysis of various scores upon the conclusion of the experiment. The discarded class (low achievement in instrumental music) varied significantly on the basis of an ANOV in intelligence scores. Thirty-six percent of the retained group and only five percent of the discarded group had previous musical training. A chi square test performed on the data revealed no significant differences between groups. It was concluded that although the measures might be helpful in a guidance program, rigid differential individual guidance cannot be justified on the basis of the results found in this study.

154. Matesky, Ralph and Helen Heffernan. "The Status of Instrumental Music Education in the Elementary Schools of California Cities." California J. Elem. Educ., 24:1 (August, 1955), 204-216.

A survey was made to determine the scope of the instrumental music program in the fourth, fifth, and sixth grades of the elementary schools of California. Of 99 questionnaires sent to city school superintendents, 96 were returned. Only 3 of the 96 had no instrumental music program. Eighty-one of the 96 districts offered some type of beginning instruction in band instruments and stringed instruments. Eighty districts also reported elementary school orchestras. Small, homogeneous string classes were prominent in the replies. About 62 percent of the districts participated in elementary school music festivals. About 82 percent of the districts reported adequate materials. Forty-five different band and 31 different orchestral methods books were used. Five districts scheduled band groups daily and 7 tri-weekly. Scheduling of string classes roughly paralleled that of band. About 63 percent of the districts had some form of pre-instrumental training.

155. Michael, William B., George Barth, and Henry F. Kaiser. "Dimensions of Temperament in Three Groups of Music Teachers." Psychol. Reports, 9 (1961), 701-704.

Temperament dimensions were compared and contrasted between three samples of experienced secondary school instrumental and choral music teachers who differed in competence as judged by specialists and in their own expressed degree of satisfaction with their choice of vocation. Three groups of male and female secondary school music teachers totaling 316 subjects were arbitrarily chosen largely from the western and southern portion of the United States. The groups were determined by nominations from music education specialists and by the teachers' expressed views regarding their vocational choice. Personal interviews were conducted with each subject. Cattell's 16 PF Questionnaire and Thurstone's Temperament Schedule were administered to all subjects. Factor analyses of three corresponding matrices of product-moment intercorrelations of the 23 temperament variables of the combined scales were calculated by the Varimax solution proposed by Kaiser. Despite differences in judged competence and degree of vocational satisfaction, the scores of the three groups of music teachers on two personality inventories yielded similar dimensions of temperament, although the elite group exhibited a dimension of sophistication. A contrasting group of less competent and less well-satisfied teachers displayed additional dimensions reflecting defensiveness-dependence accompanied by a relative lack of ambition as well as extroversion that is impulsive and naive in its expression. Factor analyses of the scores on the two scales revealed for the three groups of secondary-school instrumental and choral music teachers comparable dimensions of temperament.

156. Mitchell, John W. "A Study of Activities and Projects Offered by United States Colleges and Universities for In-Service Education in Music." Unpublished Doctoral Dissertation, University of Wisconsin, 1958. 167 pp. (Ph.D.). (Univ. Micro. No. 58-7517).

A survey was made of the extent of music activities and projects which were offered by colleges and universities of the United States in the area of in-service education.

Questionnaires were constructed and sent to 903 chairmen of departments of music at all four-year institutions of higher education accredited by the Association of American Universities and/or the six regional associations or the American Association of Colleges for Teacher Education. Copies were also sent to all 48 Extension Music Specialists of the U.S. Department of Agriculture. A low return of 213 was received but the returns were fairly evenly distributed by type and size of institutions. Activities and projects offered by 10 percent or more of the 90 public institutions studied were courses in music appreciation, music history, music theory, applied music, and courses in education, clinics, conferences, and sessions for directors in connection with events for school performers. Music courses offered by approximately 10 percent of the 115 private institutions studied were courses in music appreciation, applied music, and courses in education, clinics, conferences, and director's sessions in connection with vocal festivals for school performers. More of the courses from all institutions were offered for undergraduate credit than for graduate credit or as non-credit offerings. More of the courses were offered on-campus than off-campus. The clinics offered by the largest number of institutions were clinics for band, orchestra, and vocal directors and for elementary classroom teachers. (Faculty Advisor: Barton W. Kreitlow).

157. Mohr, Estell E. "Music Teaching Problems of Colorado Elementary School Teachers." Unpublished Doctoral Dissertation, Stanford University, 1946. 356 pp. (Ed.D.).

A survey was conducted to discover the teaching problems in music of Colorado elementary school (K-8) classroom teachers who taught music along with their other instructional duties. The initial items for a problem check list were supplied by 183 Colorado elementary classroom teachers. The problems were grouped in six areas and the check list was submitted to 12 additional teachers for criticism. The check list was then submitted to 1161 elementary teachers in Colorado, 524 being returned. The data were analyzed in frequencies and percentages. Approximately four-fifths of all music taught in the elementary grades of Colorado was reported to have been taught by the regular classroom teacher. Of these teachers, nearly one-third had no course in the methods of music teaching, a small proportion expressed an inability to sing correctly. Music in Colorado elementary schools was taught to two or more grades combined as frequently as to each grade separately. Almost three-fifths of the teachers had no supervisory assistance in music, although the supervised teachers listed as many problems as the non-supervised teachers. Activities and teaching methods designed to introduce older beginners to music was an outstanding need of the Colorado teachers of the upper elementary grades. The development of specific skills and understandings in music seemed to be relatively of little concern to the grade teacher. The leading problems in the teaching of music were the same for nearly all elementary teachers regardless of educational background, training in music, teaching experience, or whether or not the teacher had the assistance of a special supervisor of music. (Faculty Advisor: I. James Quillen).

158. Mosher, Raymond M., and Adolph W. Otterstein. "How We Predict Success in Music Curriculum." School Music, 34 (March, 1934), 12-13.

The purpose of the study was to determine the ability of a selected battery of tests in selecting students for the vocational study of music education. Subjects were undergraduates at State College, San Jose, California. All were majoring in music education. The test battery given to the subjects consisted of the American Council Psychological Test, the Iowa High School Content Test, the Kwalwasser Test of Music Appreciation, the O-M Individual Sight Singing Test, and the Kwalwasser and Seashore Tests of Musical Aptitude. Criterion for success in music was established by weighting equally first quarter college grades and teacher ratings in applied music. A predictive index was obtained by weighting scores on the separate tests in accordance with the amounts contributed by each in terms of the criterion. The successive weighting approximation method of Kelly was used to determine weightings. The data were presented in tables which, through correlations and standard deviations, indicated weights. Useful measures were yielded by combining test scores so that general forecasts could be made for each music student. Tests other than music tests offered higher predictive measures than did music tests.

159. Mueller, Paul R. "The Status of the Junior High General Music Class in California." Unpublished Master's Thesis, Fresno State College, 1960. 70 pp. (M.A.).

A survey was made of the administrative organization, teaching organization, and areas of study in General Music. A questionnaire was sent to each of 131 California general music teachers who were randomly selected. At least one junior high school in each public school district received a questionnaire. Eighty two (65 percent) were returned and usable. The majority of general music classes surveyed in California were taught 50 minutes per day, 5 days per week for 18 weeks by teachers whose major subjects in college was music. Two-thirds of the schools did not provide their teachers with a syllabus, while less than one-third used a textbook. One-third of the teachers indicated a preference for teaching classes other than general music. More than 80 percent of the schools surveyed permitted the students to substitute participation in a performance group for general music. A majority of the teachers devoted 60 percent of the period to singing, playing instruments, and listening to records. The other 40 percent of the class period was devoted to areas of study relating to music fundamentals, instruments of the band and orchestra, composers and their music. A majority of the teachers reported a change of activity at least every two weeks. (Faculty Advisor: Ralph C. Rea).

160. Music Educators National Conference. "The Present Status of School Music Instruction." Music Educ. Res. Council Bull. No. 16. Chicago: The Conference, 1934. 32 pp.

A survey was made to obtain information concerning the status of music at the beginning of the school year 1933-34. Of 3300 questionnaire sent to a stratified sample of public school superintendents in the United States, 1761 replies were received. The sample was stratified by areas of the United States and by town population. The data were analyzed by frequencies and percentages. Forty-nine percent of all towns surveyed had curtailed "cultural subjects" in the schools but only four percent had eliminated them entirely. The most common salary reduction was about 15 percent, based on a small number of answers, for music teachers. In schools which had curtailed their "cultural subjects" the most common reason given was the economic depression. Only eight percent of school board members objected to the music program while superintendents were almost unanimously in favor of it. Superintendents reported that usually all cultural subjects were given equal appropriations but when discrimination existed it was almost always in favor of music. Facts concerning the cost of music instruction were usually not provided by the respondents.

161. Nagro, Constantino F. "An Analysis of Certain Factors Relative to the Promotion of Interest in the Study of Musical Instruments." Unpublished Doctoral Dissertation, Chicago Musical College, 1954. 141 pp. (D.M.Ed.).

Interview questionnaires were constructed and submitted to four groups of graduate students and college professors in order to analyze and evaluate certain factors that may promote interest in the study of musical instruments. Interviews were held with 530 students, parents, teachers, and administrators from selected Illinois cities of over 15,000 population. Some students were interviewed at the National Music Camp. Twenty cities were represented. Public, parochial, and private schools were represented but no breakdown of percentages was made. The data were analyzed in frequencies and percentages. Many students indicated interest in the playing of other instruments in addition to those already played. Interest in playing musical instruments by students appeared to be primarily motivated through the desire to play in school orchestras and bands. A high percentage of the students indicated that they were taking weekly class and private instruction. A high percentage of the students also indicated a preference for the playing of instruments similar to those played by the teachers. Through the musical preferences of the home, many favora'le influences for inculcating interest in the study of musical instruments are indicated, especially in the areas of classical music preferences and the playing of instruments by family groups. Teachers indicated proficiency on an average of 4.3 instruments. Sixty-two percent of the teachers performed with their pupils. Teachers and administrators concurred regarding the importance of orchestra programs and the desirability of starting string instruction at an early age.

162. Nash, Louis P. "The Enjoyment of Music by Junior High School Students: Their Responses to Five Methods of Presenting Recorded Music. Unpublished Doctoral Dissertation, University of California, 1962. 234 pp. (Ed.D.). (Calif. Univ. Micro. No. CU-5840).

An experiment was conducted to determine (1) which of several types of music is most appealing to junior high school students, (2) which of several types of presentations assists most in developing enjoyment, (3) the effects of repetition upon enjoyment of music, (4) the effects of school music training upon the enjoyment of music, and (5) the effects of individual recordings upon the enjoyment of music. The subjects were 347 unselected students from one junior high school in Oakland California. A random sample of the fathers' occupation was taken and compared with California and National Norms as established by the Dictionary of Occupational Titles. Classes, or groups, taking the tests, were equated on age, sex, and I.Q. Thirty recordings were played for each group tested. Statistical analyses of the data were made by means of the median test and the chi square test. Music from the musical comedy was the type most enjoyed by the subjects. Folk music was more appealing than operatic music or orchestral music. Lively orchestral music in the classic tradition increased in enjoyment upon repetition of the same type of music, whereas, the enjoyment of slow orchestral music in the romantic tradition decreased upon repetition. The type of introduction used in presenting recordings did not have much importance in affecting enjoyment. Increase in grade level appeared to bring a corresponding decrease in enjoyment for the types of music presented in this study. (Faculty Advisor: Walter Loban).

163. Neal, Charles D. "Carry-over of Musical Activities Following Graduation from High School." Unpublished Doctoral Dissertation, Indiana University, 1948. 211 pp. (Ed.D.).

Relationships between high school musical training and actual music participation in adult life were investigated in this study. Research departments of three national broadcasting agencies assisted the investigator in developing a questionnaire. The questionnaire was refined after being administered to a sample of 125 high school students and was mailed to a sample of 1,000 high school graduates. Two hundred ninety-six usable replies were received. The data were analyzed by means of the Pearson Product Moment correlation, F test, chi square, and standard error of estimate. The data suggested a significant amount of carry-over between participation in musical organizations in high school and participation in musical organizations during adulthood. No noticeable difference appeared in terms of group singing during adult life. There appeared to be very little difference between respondents owning or not owning their musical instrument in high school and their continuation of music participation in adult life. It appeared that the amount of training while in high school (within or outside of the school) had no significant bearing on the amount of time devoted to listening to music reproducing instruments in adult life. A large majority of adults reported having a favorable reaction upon hearing a composition played or sung that was learned while in high school. There seemed to be a general agreement among instrumentalists and vocalists that both the vocal and instrumental programs in high schools are of equal importance. Men seemed to strongly favor band as a leading adult music organization. Eighty percent of the respondents reported that the study of music did not change an individual's personality, while 20 percent indicated that they believed some change occurred in this respect. (Faculty Advisor: Carl G. F. Franzen).

164. Nelson, Carl B. "An Experimental Evaluation of Two Methods of Teaching Music in the Fourth and Fifth Grades." Unpublished Doctoral Dissertation, University of Minnesota, 1954. 305 pp. (Ph.D.). (Univ. Micro. No. A54-1807).

An experiment was conducted to test the relative worth of a course of study which utilized not only vocal music training but also instrumental music instruction. A group of 104 fourth and fifth grade students were selected in one school and randomly assigned to experimental and control groups. The representativeness of the sample, with respect to the fourth and fifth grade students in the entire city school system, was determined

through the use of the analysis of variance on I.Q. and grade point data. The experimental instruction involved a combination vocal-instrumental approach while the control group received vocal instruction only. The investigator developed and validated two tests--a test of basic music notation knowledge and a test of audio-visual musical discrimination. The following variables were studied in the analysis of the research: pre-and-post-test of the developed achievement tests, pre-and-post-test of the Keston Music Preference Test, I.Q., grade point average and reading comprehension. The fifth grade experimental group had a significantly higher change than did the control group in performance of music skills as measured by the writer's test of knowledge of basic music notation. No reliable differences were found between the experimental and control groups with respect to measurement by the writer's audio-visual musical discrimination test. Analysis of the data yielded by the Keston test revealed a significant difference between the experimental and control groups, favoring the experimental treatment at both levels. (Faculty Advisors: Walter W. Cook and Cyril J. Hoyt).

165. Nelson, Carl B. "A Follow-up of an Experimental Teaching Method in Music at the Fourth and Fifth Grade Levels." J. Exper. Educ., 24 (June, 1956), 283-289.

The investigator studied the effects of a 1952-1953 experiment (Nelson, C. B. Doctoral Diss., Univ. of Minnesota, 1954 and J. Exper. Ed., 23 (March, 1955), 231-238) by testing the further development of children who participated in the experiment. One year after the termination of the original experiment, the children in both the experimental group (instrumental-vocal instruction) and the control group (vocal instruction only) were retested. The tests used were the Keston Music Preference Test and the author's tests of Audio-Visual Musical Discrimination and Knowledge of Musical Notation. Analyses of variance and covariance were employed. The fifth grade "experimental" group was significantly better than their control group with respect to knowledge of musical notation. (Note: This difference was not noted immediately after the original experiment.) The sixth grade experimental group were significantly more capable in audio-visual musical discrimination than their control group. (Note: This was not true in the original experiment.) Neither the fifth nor the sixth grade experimental groups preferred "better music" than the control groups. On all three criteria, no real differences emerged between experimental and control groups when only the year 1953-54 (the year following the original experiment) was considered.

166. Nelson, Marvin G. "A Comparative Study of Instrumental Music Programs in Selected Public Schools Systems in Four North Central States." Unpublished Doctoral Dissertation, Chicago Musical College, 1955. 146 pp. (D.M.Ed.).

A comparative study of the instrumental music programs in 47 public schools in four North Central States was made for the purpose of setting guidelines for the evaluation of the Oak Park (Illinois) Public School instrumental music program. Forty-seven cities in the states of Illinois, Indiana, Michigan, and Wisconsin were selected which were similar in size to Oak Park and were either cities or large suburbs of cities. Expenditures per pupil in the states surveyed ranged from $305.00 to $391.00 per year. Twenty-two of the cities were visited directly for observation during four extended field trips and the remaining 25 were contacted by questionnaire. All of the cities studied were estimated to have superior instrumental music departments. Data were reported in frequencies and percentages. Approximately 60 percent of the schools offered tonette instruction and only 10 of the 47 schools offered class piano instruction. The weakest area of instrumental music was reported in stringed instrument instruction. Sixty-eight percent of the schools offered summer music programs. Over 50 percent of the cities indicated that they had all-city orchestras and bands. More schools in this survey participated in non-competitive music festivals than in music contests.

167. Nelson, Russel C. "A Physiological Study of the Utilization of the Vital Capacity in Phonation Resonation and Articulation and its Effect on Tone Quality in the Adolescent." Unpublished Doctoral Dissertation, University of Michigan, 1954. 376 pp. (Ph.D.). (Univ. Micro No. A55-656).

The purpose of this study was to determine the procedures necessary for the reducing of breathiness in the high school voice, the building of fuller resonation, and the development of a higher and more selective articulation. The subjects (44 high school students who volunteered for a special chorus in one high school) were selected and were given the following pre-experimental measurements: Seashore Tests, x-ray pictures of vocal mechanism, and physical measurements (body measurements, vital capacity, etc.). The students made tape recordings of a simple melody. The recordings were judged by Kenneth N. Westerman and two other judges using Westerman's biolinquistics approach. The experimental procedures included notation of posture and type of breathing for each student, abdominal breathing instruction, and ten minutes of daily vocalizing and tongue exercises during the nine month experiment. Improvement in the singing voice of each student was recognizable. The growth of the large skeletal muscles neither interfered with nor facilitated the development of the more highly specialized minimal motor muscles in their development toward greater specificity. No physiological pattern of gross skeletal or laryngeal growth emerged. Breathiness in tone quality was found in voices under each classification of resonance. The development of the minimal motor muscles to greater specificity through the use of exercises based upon a biological and phonetic knowledge of the human voice directed the utilization of the vital capacity of the subjects involved toward improved tone quality, more normal vibrato, fuller resonation, a higher degree of selectivity in articulation, and the improvement in musical accomplishment. (Faculty Advisor: John H. Muyskens).

168. Nicholson, Robert A. "The Harmonic Preparation of the High School Choral Conductor." Unpublished Doctoral Dissertation, New York University, 1952. 154 pp. (Ph.D.). (Univ. Micro. No. A53-2078).

A survey was made to discover the extent to which the prospective high school choral conductor was being prepared to analyze, for conducting purposes, the harmonic content of high school choral music. A letter was sent to all state music education associations requesting state festival programs. Two hundred thirty-seven choral compositions were found in the 22 programs received. Criteria were formulated for classifying these compositions as to harmonic content. The criteria were validated by a group of nine judges. A questionnaire was used to secure information from 214 teacher-training institutions concerning harmony courses offered in the undergraduate program. The relationship between the harmonic content of high school choral music and the harmonic vocabulary provided the prospective high school choral director by use of criteria and harmonic classifications previously compiled and validated. There was little agreement among the colleges surveyed regarding what harmony course content was offered. Further confusion resulted in the many different symbols and terms used to designate harmonic combinations. A serious deficiency was noted in the harmonic preparation of the high school choral director, especially in the area of modulation study. Modulation was very often divorced from other harmonic procedures. (Faculty Advisor: Vincent Jones).

169. Noah, Max S. "Promotion of Music Education by Southern State Department of Education." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1953. 202 pp. (Ph.D.).

The purposes of the study were (1) to discover the means by which the southern state departments of education promote music education, (2) to analyze their promotional materials issued in printed or mimeographed form, and (3) to make recommendations for more effective state-wide programs of promotion. All publications and printed matter, related to the problem were obtained from the selected state departments of education by correspondence and by a visit to each state. A check list was used to determine duties and services of state music supervision personnel. The data were analyzed in frequencies. A second interview was held after the data were collected in which the state music supervisors were asked to verify the findings. Child development was included in most state literature on music education but little evidence of a "profound statement of philosophy" from any state was found. Georgia, Kentucky, and South Carolina were the only states not providing literature which could aid elementary music teachers. All other states surveyed provided some form of state administrative leadership in music education. Course offerings in secondary schools ranged from general music for all students through elective

performance groups, theory, harmony, appreciation, and composition. In most states music textbooks were selected and adopted by the boards of education. Types of teaching certificates required varied with little uniformity. Music supervisors performed almost all general and specific services listed on the check list. Promotional efforts of the state departments of education were more extensive where trained personnel in the field of music education give full time service. (Faculty Advisor: Henry Harap).

170. Nohavec, Hazel B. "The Ability Pattern of Senior College Students Majoring in Music Education at the University of Minnesota." Unpublished Doctoral Dissertation, University of Minnesota, 1943. 398 pp. (Ph.D.).

An investigation was made of certain elements in the pattern of abilities and other characteristics of senior college students who were majoring in the field of music education at the University of Minnesota, and in the inter-relationships of these abilities and characteristics. The entire population of 162 music education majors (1937-1941) was selected for study. Data was obtained from student teaching scores, faculty rankings of probable success, performance ratings, and 22 variables such as those measured by personality scales, interest inventories, musical talent tests, et al. A music Adjustment Inventory was constructed by the investigator and validated. The variables were statistically analyzed in terms of central tendency, dispersion, homogeneity of samples, significant differences, and inter-correlations. The claim for homogeneity of the subsamples, based on year of graduation, was justified. Students were found to exhibit a greater dispersion in student teaching performance ratings than in traits. It was therefore concluded that an all-over rating by the supervising teacher could replace the 14 items which comprised the "Practice Teaching Recommendation Blank," insofar as a composite evaluation was concerned. The limitations of student teaching scales as discriminating devices among variable traits were clearly apparent. No inter-correlation among the various honor-point measures greatly exceeded the minimum level of the .01 level. Results on the Strong Vocational Interest Inventory revealed no pattern which could be considered as uniquely belonging to music education students. (Faculty Advisor: Wesley E. Peik).

171. Osborn, Murray J. "The Matching of Vowel Quality in Singing: A Preliminary Study of the Matching of Frequency Characteristics of [i] and [u] Vowel Sounds as Sung by Seven Male Voices." Unpublished Master's Thesis, Illinois State Normal University, 1955. 56 pp. (M.S.).

The determination of how nearly alike several persons can produce certain vowel sounds was the objective of the study. Seven boys who had received at least one year's experience in the investigator's high school choral classes were chosen as subjects. All subjects had been exposed to some instrumental music training. Four had had private lessons. A short musical passage was composed by the investigator and each subject was recorded on tape as he performed the passage at about four different pitch levels. Testing procedures were held constant. The tape recordings were then analyzed by The Panoramic Sonic Analyzer, a superheterodyne type of audio receiver which provides visual indications of frequency versus amplitude throughout the entire audio spectrum. A Hewlett-Packard audio signal generator was also used. It is possible for one individual to match the frequency characteristics of the vowel sounds [i] and [u] of another with accuracy. The matching of vowel quality depends largely upon the accuracy of matching the fundamental pitch. Vowel changes result in changes of voice quality if the wave form of a tone may be taken as a measure of tone quality. (Faculty Advisor: Leslie M. Isted).

172. Park, S. Norman. "Attitudes of Adolescents in Music." Unpublished Master's Thesis, Colorado State College of Education, 1944. 225 pp. (M.A.).

Attitudes toward music of 613 seventh, eighth, and ninth grade students were sought in an attempt to determine reasons for the apparent lack of interest in music as a subject among adolescents. A questionnaire was constructed and checked by music teachers who judged items for "feasibility and worth." Each of the 613 subjects was given the

Seashore battery. Mental achievement scores were secured from school files. The data were analyzed in percentages and in "tendencies." The majority of the subjects expressed a liking for music although most indicated that they would rather listen to music than to perform music, including many who had received special music training. More students liked to sing than to play an instrument. Girls tended to like singing better than boys and rated themselves higher in music reading. The instrumental type of music program was the preference of most students, the dance band being rated a strong favorite. (Faculty Advisor: Carl G. Melander).

173. Parker, Olin G. "A Study of the Relationship of Aesthetic Sensitivity to Musical Ability, Intelligence, and Socio-economic Status." Unpublished Doctoral Dissertation, University of Kansas, 1961. 168 pp. (Ed.D.). (Univ. Micro. No. 61-5028).

An analysis was made of the relationships between aesthetic sensitivity and musical ability by holding constant intelligence and socio-economic status; the relationship between aesthetic sensitivity and intelligence by holding constant musical ability and socio-economic status; and the relationship between aesthetic sensitivity and socio-economic status by holding constant musical ability and intelligence. The investigator administered the Wing Test of Musical Ability and Appreciation and the Gaston Test of Musicality to a stratified, random sample of 1,074 public high school students from 12 Kansas schools. The Warner Occupation Rating Scale was used to determine socio-economic status, while I.Q. scores were obtained from school records. The partial correlation method was applied in calculating correlations among the variables. It was concluded that only a moderate relationship existed between aesthetic sensitivity and music ability, with intelligence and socio-economic status being held constant. The relationship between aesthetic sensitivity and socio-economic status, as shown by this study, was found to be negligible. (Faculty Advisor: Marcus E. Hahn).

174. Patrick, Donald W. "A Comparative Study of Musical Achievement of the General Chorus and General Music Approach at the Junior High School Level." Unpublished Master's Thesis, University of Kansas, 1952. 54 pp. (M.M.Ed.).

A comparison was made of two methods of music instruction at the seventh and eighth grade levels. Two seventh and eighth grade classes (all female) were pre-and-post tested with measures of musicality, musical interest, and musical preference. Measuring instruments consisted of the Gaston Test of Musicality, Herman-Nelson Tests of Mental Ability, Keston Preference Test, and Kuder Interest Inventory. Groups were equated on the basis of intelligence, mean age, sex, grade point average, musical interest, musicality and musical preference. Tests of significance (Behrens -- Fisher d Test and Fisher t Test) were performed between means of experimental groups on the above measures. One group received instruction in the traditional junior high chorus manner; the second, with major emphasis on understanding various types of music heard on radio, at concerts, and musical shows. There were no observed differences in end-products of the two methods -- general chorus or general music class. (Faculty Advisor: James F. Nickerson).

175. Patrick, Nelson G. "A Comparative Study of Music Education in Texas Four-Year Colleges and Universities." Unpublished Doctoral Dissertation, University of Texas, 1955. 379 pp. (Ed.D.).

A survey was made of course and degree requirements in music in the four-year colleges and universities of Texas. A questionnaire designed for obtaining factual information was sent to all four-year colleges in Texas. Forty-one questionnaires were returned. College catalogues were also analyzed. Evaluative criteria were the standards published by MENC, NASM, MTNA, and AACTE. (Only the findings relevant to music education are included here.) Approximately 55 percent of the white schools compared favorably with the standards of the evaluative criteria. Two-thirds of the Negro colleges met the standards of minimum requirements in basic music courses while all white and 85 percent of the state universities compared favorably to the established standards. State controlled institutions ranked highest in the area of music performance. None of the inde-

pendent Negro colleges met the minimum standards in performance. More than half of all types of Texas four-year colleges and universities compared favorably with the evaluative standards in the area of professional education. Three-fourths of the state controlled colleges and universities, over one-half independent white institutions, and 83 percent of the independent Negro colleges compared favorably with the standards established by the evaluative criteria. (Faculty Advisor: J. W. Reynolds).

176. Peiterson, Dana N. "An Experimental Evaluation of the Transfer Effects of Rhythm Training in Spaced Notation on Subsequent Reading of Commercially Printed Music." Unpublished Doctoral Dissertation, University of Minnesota, 1954. 312 pp. (Ph.D.). (Univ. Micro. No. A54-1443).

The rhythmic performances of two groups of junior high school instrumental students was compared after receiving rhythmic training, the training differing with regard to the time-space ratio of note values. Recording procedures included the use of a graphic recorder and an audio tape recording. Subjects were randomly selected from two junior high school bands. Two tests of rhythmic performance were constructed and reliabilities computed. Form A (pre-and-post-test) consisted of one-measure items selected from a pool of rhythmic patterns representative of those found in junior high school band literature. Form B consisted of musical phrases which provided rhythm patterns in melodic context. Scores for Form B were based on subjective evaluations of the recorded performances (rel. coef. = .90). On test Form A there was no significant difference between the means of the groups receiving training in spaced notation and of those receiving training using commercially printed music. The two experimental groups (spaced notation and commercially printed music) were significantly superior to the control group (receiving no special rhythm training) at the end of the six month period. On test Form B there was also no significant difference between the two experimental groups; however, the probability that there was a real difference between the means of the combined experimental groups and the control groups, was calculated to be between the .01 and .05 levels of significance. In all cases there was general agreement between the subjective judgments of the audio tape recordings and the graphic recorder. (Faculty Advisor: Walter W. Cook).

177. Pence, Don P. "A Study to Determine the Optimum Grade for Beginning Class Study of Wind Instruments." Unpublished Master's Thesis, University of Kansas, 1942. 84 pp. (M.A.).

The purpose of the study was to ascertain the best grade level for children to begin the study of wind instruments in classes. The subjects were 31 students from grades five through nine in one school. The tests employed were the Henman-Nelson Tests of Mental Ability, Seashore battery, Drake Musical Memory Test, Providence Inventory Test in Music, Gaston Test of Musicality, and Gaston "Home Musical Influence Scale." Number of teeth and lung capacity were determined for each subject. Four experimental groups of subjects with no previous wind instrument experience were formed, one each of beginning 5 th, 6th, 7th, and 8th graders. Recordings were made throughout the instructional period of 24 weeks. A sight-reading test constructed by the writer and was administered to all students at the end of the period. The data were tabulated in frequencies, percentages, and averages. A direct relationship was shown between physical maturation and musical progress. During the second year of study an acceleration in the rate of progress was observed. Direct relationships were observed between quality of performance and the Gaston Test of musicality, general intelligence and musical scholarship, and the various aspects of musical expression, such as singing, playing, and whistling. A positive relationship existed between rate of progress, quality of performance, and sight reading ability. The type of instrument studied was found to be a factor in the rapidity of development. The quality of the instrument was not found to be the deciding factor which determined the rapidity of development. (Faculty Advisor: E. Thayer Gaston).

178. Peterson, Harold W. "Problem Areas in Music Education." Unpublished Doctoral Dissertation, Yale University, 1956. 231 pp. (Ph.D.).

A survey was conducted to identify some of the major problem areas which public school music teachers face, and to show what significance these problem areas have for teacher training. A questionnaire was developed which was focused on three problem areas, namely, teacher-student relationships, teacher-other adults relationship, and the teacher's development of objectives. The questionnaire was administered to 17 teachers for validation. Letters were sent to all colleges approved by A.A.C.T.E. or N.A.S.M. to request names of their outstanding graduates presently in public school music. Of 757 teachers recommended, 374 returned questionnaires. Ten teachers from the total sample then were interviewed so that they might express themselves more freely than on the questionnaire. The preparation for teacher-student relationships which these teachers received was not realistic in relation to the situations which they actually faced as teachers, or was not presented in a manner which made it meaningful to them as students. These teachers needed (1) more practical training in specific administrative techniques and more efficient methods of sharing successful or promising practices, and (2) more training and experience in the principles and techniques of personal relations. These teachers needed to re-examine (1) their attitudes toward the relative value of music for public performance and music for the enjoyment and inspiration of the participants themselves, and (2) their methods of evaluating music and distributing information regarding the suitability of materials.

179. Peterson, Ruth D. "An Investigation of Academic Music Courses in the Public Secondary Schools of Missouri." Unpublished Master's Thesis, Northeast Missouri State Teachers College, 1962. 141 pp. (M.A.).

A survey was made of the academic music courses offered in 150 secondary schools of Missouri during the school year 1961-62. A 1960 report by the Missouri State Department of Education was studied to determine the number of school districts offering academic music courses. A questionnaire was designed to obtain information concerning these courses. A trial questionnaire was sent to selected high school teachers for evaluation and suggestions. The final questionnaire was sent to 150 Missouri high schools (at least one in each county) of which 95 usable questionnaires were returned. More than one-half of the courses investigated were offered in schools with enrollments of 1-250. Almost three-fourths of the courses were offered annually, and in 90 percent of the schools were courses of one year duration. Most were elective, and met five days per week for 40-60 minutes per meeting. Textbooks currently in publication were not felt to meet the need of many academic music courses, yet more than one-half the instructors using workbooks were satisfied with the available publications. General deficiencies were thought to exist in library reference books (in music), record libraries and equipment, and budget. Activities used by an overwhelming majority of instructors included lectures, listening to records, discussion of both text and reference book assignments, and written examinations. The period in music history most emphasized was from 1800 to the present time. The types of literature most emphasized were symphonic music, opera/oratorio, and American folk music. (Faculty Advisor: Leon C. Karel).

180. Peterson, Wilbur J. "Organizational Plans Favored by Administrators for Elementary School General Music." Music Educ. J., 43 (January, 1957), 48-49.

A survey was made of practices in the organization of music in Arizona elementary schools, and the plans favored by Arizona elementary school principals when given a free choice. Questionnaires were sent to 96 randomly selected elementary school principals in Arizona. Information was sought concerning organizational plans in effect in grades 1-3, 4-6, and 7-8, and the principals' preferences for one of four plans in each of the three levels of their school as follows: "Plan A" - all music being taught by a music specialist with no music responsibility for the classroom teacher; "Plan B" - music being taught in part by the classroom teacher and in part by a visiting specialist; "Plan C" - all music being taught by the classroom teacher; and "Plan D" - music being taught by classroom teachers who "trade" subjects with one or more teachers. "Plan B" was used most frequently in grades 1-3 (36 percent), followed by "Plan C" (26 percent), "Plan A" (57 percent), "Plan B" (21 percent), "Plan D" (17 percent), and "Plan C" (5 percent).

In grades 7-8 the distribution was: "Plan A" (89 percent), "Plan C" (6.5 percent), "Plan D" (3 percent), and "Plan B" (1.5 percent). There was no significance found in the relationship between time spent on music and the plan in effect. There was no significance found between the size of school faculties and the plan in effect, except in schools with fewer than 15 teachers where "Plan D" was in effect.

181. Petzold, Robert G. "The Applied Music Skills Which Prospective Teachers of High School Instrumental Music Need." Unpublished Doctoral Dissertation, University of Wisconsin, 1950. 235 pp. (Ph.D.).

The purpose of the study was to determine those applied music skills for woodwind instruments which prospective teachers of instrumental music need to acquire. Catalogues from seven midwest states were analyzed to ascertain requirements and credits given in the areas of applied woodwind instruction. A check list was constructed to obtain data on each subject's professional (music teaching) background and (a separate check list) to measure applied skills possessed. The "applied music skills" check list was constructed by (1) random sampling of music directors (public schools) to determine the prevalence of method books in use in the midwest, (2) extracting musical items occurring often in all of the preferred books, and (3) ranking by judges regarding the difficulty of the musical items selected. Subjects were selected for the study on one of three criteria, all of which restricted the sample to the "more successful directors" (N=195). Respondents indicated that minimum goals of achievement needed in applied woodwinds for prospective instrumental public school teachers included (1) a knowledge of, and ability to demonstrate the fundamentals of tone production for the flute, oboe, clarinet, and bassoon, and (2) performing ability on the following: Clarinet - equivalent skill attained in an intermediate method book and all fingerings; Flute - equivalent skill attained in an elementary book, range from C^1 to G^3; Oboe - equivalent skill attained in an elementary book at slow tempo including knowledge of all common and chromatic fingerings and usable range to D^3; Bassoon - equivalent skill attained in the first half of an elementary method book, common fingerings, and ability to choose which auxiliary finger is best suited to the situation; All - articulation technique. (Faculty Advisor: A. S. Barr).

182. Petzold, Robert G. "Development of Auditory Perception of Musical Sounds by Children in the First Six Grades." Report of Cooperative Research Project No. 766 (SAE 8411), University of Wisconsin, 1960. 125pp.

An experiment was conducted to determine the difference between children at each of the first six grade levels in the ways in which they perceive and respond to the auditory presentation of musical sounds. Seventeen basic song texts were analyzed and common tonal configurations which could be used on test items were extracted, four tests being constructed. The four tests were administered individually to the subjects and tape recordings were made of each subject as he reproduced vocally the test items. The t test was used in comparisons between grade levels, musical experience levels, accomplishment levels, and between boys and girls. There were no significant differences between boys and girls in terms of the auditory perception of musical sounds. The hypothesis that age, as defined in terms of grade level, is a significant factor in the development of auditory perception, was accepted with certain reservations. Grade level and the development of auditory perception were related if one limits such comparisons to the above average competence groups. It was not possible to accept or reject hypotheses which might be made regarding the relationships between age and the development of auditory perception. Correlations between the four configurational tests were significantly high. The hypothesis that musical training and experience is a significant factor in the development of auditory perception, may not be rejected with confidence. The hypothesis that the addition of a rhythmic element to a melodic pattern has a significant influence upon the auditory perception of such melodic patterns was rejected.

183. Petzold, Robert G. "The Perception of Music Symbols in Music Reading by Normal Children and by Children Gifted Musically." J. Exper. Educ., 28:4 (June, 1960), 271-319.

Experimental learning situations were developed which provided information regarding the perception of music symbols by children of average musical ability and children gifted musically at the fourth and sixth grade levels. Forty-seven tonal configurations of a difficulty level to which the subjects had been exposed were obtained from an analysis of 326 songs randomly chosen from basic song texts appropriate to the age group being studied. Criteria concerning the musically gifted were established. Following revisions, the final test was administered to a stratified sample of 150 subjects. Data were analyzed by the analysis of variance, t tests, and F tests. There was no significant difference between boys and girls in terms of ability to read music. Teacher ratings of subjects, when compared with results of the Kwalwasser test, showed very low correlations. The subjects experienced considerable difficulty in reading tonal configurations which commonly appear in the songs they sing. The common reading errors revealed a general tendency not only to respond to the outward shape of the configuration, but to substitute a similar, more familiar one. The subjects performed at a much higher level on the aural part of a test than on the visual part. The sixth grade children did not perform significantly better than the fourth grade children, although they clearly demonstrated a faster learning rate for the song. Instrumental music instruction did not seem to be a factor in the music reading abilities of either the average or gifted children in this study.

184. Phelps, Mildred W. "The Teaching of String Instruments in the Instrumental Techniques Course." Unpublished Doctoral Dissertation, State University of Iowa, 1951. 279 pp. (Ph.D.).

Thirty colleges were surveyed to ascertain and evaluate administrative policies and teaching procedures in college string instrument classes. Twenty of the colleges selected were visited by the writer and interviews were held with string class teachers. The other ten colleges not visited were sent questionnaires. Other questionnaires and check lists were sent to all thirty colleges and to all music teachers who had graduated from these schools (1941-1951). A form for evaluating the individual class string programs was made and validated by a board of consultants, expressions being obtained from students, graduates, observations in classrooms, and conferences with instructors. College catalogues were analyzed. The string instruments studied by each music education student varied from the violin alone to all four instruments. Required string class work changed from two-thirds of a semester to six semesters, while credits ranged from two-thirds semester hours to three semester hours. Fourteen institutions had string classes for like instruments, eight had mixed classes, and eight had a combination plan. Orchestral experience was provided in 20 of the colleges. The median number of school owned stringed instruments was 38, the median value being $3,200. The playing proficiency standard usually set for one semester was usually the equivalent of one or two years instruction for a ten or twelve year old. Of the 287 students enrolled at the time of this study 133 did not look forward to teaching strings, 127 anticipated such teaching and 25 were undecided. Recommendations and a suggested string program were also outlined. (Faculty Advisor: Himie Voxman).

185. Pittsburgh Pennsylvania Public Schools, Department of Curriculum and Research. "An Experimental Study of the Value of Instrumental Training in Public School Music." Pittsburgh Schools, 11:2 (November-December, 1936), 49-58.

A comparison was made between the relative value of training in vocal music and vocal-instrumental music in grades three through seven as measured by the Kelsey and the Kwalwasser-Ruch tests of musical achievement and accomplishment. Experimental and control groups were established at each grade level from grades three through seven (N=626). The groups were equated on school grades and scores earned on a test of musical accomplishment. A teachers' manual, used in a previous study, was used by the teachers of the experimental group. The experimental groups received one-half instrumental and one-half vocal instruction. The control groups followed the conventional course of study - group singing. The experimental period was six months. Results of the study were measured in terms of gains between the initial and final test scores as well as a sight-reading test given at the end of the study and a test constructed by Earhart and Gatto for the

recognition of rhythm and rhythm notation. Performance on the sight-singing test was evaluated by supervisors of the music department. Statistical measures included mean gains, standard deviations, standard error of difference, and critical ratio. Results of the standardized tests were in favor of the control group, but neither the results of the informal tests, nor the judgments of critics were consistently in favor of either group. Differences in gains in favor of either group were not statistically significant. Therefore, either method of instruction was about equally effective in developing those musical abilities and appreciations which these tests measure.

186. Pottle, Ralph R. "Intonation Problems in School Bands." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1943. 168 pp. (Ph.D.). (Joint Univ. Lib. Micro.)

An experimental inquiry into various physical factors affecting musical pitch of wind instruments was conducted in order to identify influences involved in intonation of public school wind instrument players. An airtight laboratory was built for the investigator by the physics department and was equipped with apparatus for changing, controlling, and recording temperature and atmospheric conditions as well as devices for measuring musical pitch and intensity. The 75 school musicians were from several states and were measured at the time of a regional competition-festival. A total of 18 readings was made for each subject at four temperature levels. In addition, three intensity readings, indicating effects on pitch of dynamics ranging from pianissimo to fortissimo were recorded in 46 cases for a total of 138 measures of intensity. The tune "America" was played by each subject in the key of his instrument, its dominant and its sub-dominant key. The data were also gathered on frequency deviations resulting from intensity variations and disparity in pitch between a tuning tone and the "same" tone when used as a constituent in the tune "America." Clarinets, cornets, and basses were the only instruments well-represented in all four temperature regions and were the only instruments treated statistically; means were computed on the other instruments. Bar instruments such as the Marimba flatted with an increase in temperature. The frequency of pitches on some wind instruments sharped while those on others flatted by increasing the loudness from pianissimo to fortissimo; the pitch of brass cup mouthpiece instruments sharped and single reeds flatted through this influence. Intonation problems increased when variations in dynamics were observed. The difference in pitch level of the tuning tone and the "same" tone used in the musical context suggested the use of a natural playing tone of musical quality when tuning the instrument. Disregard for the American Standard Pitch A-440 led to many of the faults in intonation noted from time to time. (Faculty Advisor: Irving Wolfe).

187. Price, David E. "An Analysis of Some of the Musical Experiences Provided for Students in the Tenth, Eleventh, and Twelfth Grades in the Public Secondary Schools Approved by the North Central Association." Unpublished Doctoral Dissertation, University of Colorado, 1950. 242 pp. (Ed.D.).

The purposes of the study were to (1) investigate the musical experiences provided for students of selected public secondary schools (grades 10-12), (2) to investigate the opinions of various groups of educators regarding the desired role of music in these grades, and (3) to compare the existing musical experiences of the selected schools with the desired role of music in these grades. A questionnaire was sent to music supervisors in 943 high schools. Usable returns were received from 442 schools (16 percent) of the total population of 2728 schools. An opinion questionnaire was constructed and sent to an arbitrary sample of 35 music experts and 35 secondary education experts and to randomly selected sample of 90 music educators. Little systematic relating of music to other areas was reported. About one-fourth of the schools reported offering one or more courses in music theory, music appreciation, music history, or general music. Nearly all schools reported having a band, but orchestras ranged from 30 percent in smaller schools to 88 percent in larger schools. Over 75 percent of the schools reported having a girls' glee club, while 81 percent reported a mixed chorus. Schedule conflict was reported as the most important limiting factor in high school music participation. Generally, schools did not provide as many singing and listening experiences as the juries recommended, nor did schools provide sufficient elective musical experiences for all students. Small

schools provided musical experiences for a larger percentage of their students than did large schools. (Faculty Advisor: H. H. Mills).

188. Price, David E. "Music for Every Child (Except 53.3 percent)." Music Educ. J., 39 (June-July, 1953), 45.

A survey was made to ascertain the effectiveness of music education programs in the North Central Association, as indicated by the percentage of students reached. A questionnaire was mailed to 943 schools of the North Central Association. A stratified sampling technique was used. Usable returns were received from 442 schools. Respondents indicated various methods used in their school to provide all students with musical experiences. Those listed were (1) required or elective music classes, (2) required or elective music activities, and (3) participation in assembly programs. Assembly programs were divided into (1) those where students participated in assembly singing, (2) those when students listened to music, and (3) those of a general nature where musical experiences were offered for a portion of the period. Six schools required regularly scheduled music in one of the senior high grades (9-12). Less than one-half of the graduating seniors had participated in some regularly scheduled music activity. In general, the smaller schools reported providing musical experiences for a greater percentage of their students than did larger schools. One-fifth of the school had assembly singing periods ranging from a few times a year to 45 minutes per week. The mean amount was 15 minutes per week. Larger schools offered music listening activities for students more frequently, the amount of time ranging from several times a year to 60 minutes a week. Planned music activities given with other types of assemblies were reported to be given by 56.8 percent of all schools reporting.

189. Price, Robert T. "Community Pressures and Their Influence in Selected Secondary School Music Programs." Unpublished Master's Thesis, The Ohio State University, 1960. 113 pp. (M.A.).

The nature and effectiveness of community pressures which are directed toward public secondary school music programs was studied in 16 local school districts in Central Ohio. Following a review of related literature, a check list was devised and refined. County superintendents, high school superintendents, and high school music teachers from the 16 schools were interviewed. The data were presented in frequencies and percentages. Among individuals who exerted pressure on the music programs of the schools, parents were the most frequently mentioned, with civic groups and booster or parent organizations often listed as instigators of pressures. Methods of exerting pressure which were mentioned in the interviews were vocal pressures in the form of complaints to the administration, gossip and individual complaints at public meetings, formal written pressures in the forms of letters or petitions, and "felt" pressures. The most frequently mentioned method of meeting pressures was described as being the explanation of policies or reasons which prompt the course of action in question. Pressures were exerted on music departments of the schools and did mold to varying degrees the content and direction of the music programs. Direct pressures generally were not a great force in determining the content and direction of music programs because of their usual concern with minor issues, but "felt" needs for compliance with community desires were a frequent source of effective pressure in influencing the content and direction of the subject-school music programs. (Faculty Advisor: William B. McBride).

190. Priestly, Ehud. "Pitch Discrimination and Certain Characteristics of Fifth, Seventh, and Ninth Grade Children." Unpublished Doctoral Dissertation, New York University, 1942. 141 pp. (Ph.D.).

An analysis was made of the auditory, academic, mechanical, socio-economic, and musical characteristics of two groups of pupils in grades five, seven, and nine who were respectively good and poor in pitch discrimination. The Kwalwasser-Dykema Pitch Discrimination Test was administered to a group of 3439 students from which the 36 highest

(above 95 percentile) and 36 lowest (below 5 percentile) scoring students were selected. Students physically handicapped in hearing were excluded from the study. The K-D Test was administered on two more occasions and the scores for each student were averaged to increase the reliability of the estimation. The following tests then were administered to the students: Otis Quick Scoring Mental Ability Test, Stanford Achievement Tests, Minnesota Rate of Manipulation Test, Kwalwasser-Ruch Musical Accomplishment Test, Sims Score Card for Socio-Economic Status, Musical Performance, and Musical Interests and Activities Questionnaire. The data were analyzed by percentile ranks, frequencies, and correlation diagrams. Pupils who were good in pitch discrimination were not superior to the pupils who were poor in pitch discrimination because of better auditory acuity. The students with superior pitch discrimination were also superior to the students with poor pitch perception in the following areas: intelligence, academic achievement, motor skills, musical achievement, and socio-economic status. The superior group was found to be of a younger average age at each grade level than was the poor pitch discriminating group. The pupils who were superior in academic achievement also were superior in music factors, while little relationship was found between motor skills and proficiency of musical performance. (Faculty Advisor: Ernest R. Wood).

191. Procopio, Dominic R. "The Construction and Validation of Techniques for Self-Development in Rhythmic, Melodic, and Harmonic Dictation for Music Education Majors." Unpublished Doctoral Dissertation, Boston University, 1956. 199 pp. (Ph.D.).

An experiment in the teaching of music dictation was conducted. A series of graded exercises of increasing difficulty for rhythmic, melodic, and harmonic dictation were constructed, tape recorded and validated. Comparisons were made between the progress achieved by an experimental group which took dictation of the above exercises by mechanical means without any active teaching on the part of the instructor and that achieved by a control group which took dictation of the same exercises in regular class lessons taught by an instructor. Three experiments were performed, one in rhythmic dictation, one in harmonic dictation, and one in melodic dictation. Students in one college freshman class were randomly assigned to the experimental and control groups (Experimental group N=16; Control group N=16). The groups were given pre-and-post-tests constructed by the writer for each of the three areas of instruction. It was concluded that college music students were able to learn to take rhythmic, melodic, and harmonic dictation via mechanical means of reproducing the exercises with a minimum of faculty instruction or supervision. The experimental group was found to make at least as much progress in all three kinds of dictation as those students who learned through the regular classroom procedure. Since dictation can be taught outside of class, a large percentage of class time previously spent in teaching dictation can be utilized to cover more thoroughly other aspects of music theory or to expand the content of the courses. (Faculty Advisor: Hersey).

192. Ramm, Katherine M. "Personality Maladjustment Among Monotones." Smith Coll. Stud. Social Work, 17:4 (1947), 264-284.

The relationship between monotonism and personality maladjustment was investigated as well as other areas which could possibly account for maladjustment in personality and inability to sing. Twenty-five fifth grade children who were classified as monotones were selected from ten schools by music personnel from these schools. Psychologists from a bureau of child guidance were also used in evaluating the data. Measurements were taken on each subject in the areas of family background, economic status, physical condition, intellectual capacity, and academic achievement. Test instruments included the Rorshack Test, the K-D Music Ability Test, the Kuhlman-Anderson I.Q. test, Behavior Rating Schedules, California Test of Personality (Form A), and a complete physical examination. The subjects were definitely below average in native musical talent as measured by the K-D Music Test. The subjects had had very meager home musical backgrounds. The group was singularly free from disturbing elements which might contribute to social or personal maladjustment. Results of the behavior and personality tests used in this study were consistent in showing that the subjects disliked school. On all tests the social and

emotional development of the children was revealed as being inadequate; this being especially true of the Rorshack Tests. The Rorshack Test revealed most of the subjects to be stiff, rigid, overly-controlled, and considerably lacking in spontaneity. All of them were inadequately adjusted to some degree.

193. Rhinehart, Charles B., Jr. "Incidence and Causes of Withdrawal from Public School Music Teaching." Unpublished Doctoral Dissertation, The Florida State University, 1962. 118 pp. (Ph.D.). (Univ. Micro. No. 63-4390).

A survey was made to determine reasons for withdrawal from public school music teaching among Florida State University School of Music alumni who had graduated from 1950 through 1956. A questionnaire was constructed and the rationale for the inclusion of each item was stated. The questionnaire was mailed to all persons who had graduated from Florida State University School of Music and had received either a bachelor's, master's or doctoral degree during the years 1950 through 1956. The questionnaire was refined by ten people before it was distributed. Of 377 questionnaires sent, 273 were returned. The data were analyzed in frequencies and percentages. Thirty-one percent of the subjects had never taught music in the public schools. Twenty-eight percent of the remaining subjects were still teaching music in the public schools. Ninety-two of the respondents felt there were definitely some aspects of the profession which might cause a school music teacher to transfer to some other vocational field; the factor most often mentioned (by 81 percent) was "inadequate salary." All of the following reasons for withdrawal from public school music teaching profession were listed by at least 60 percent of the respondents: inadequate equipment, unsatisfactory class scheduling, inadequate financial appropriations for music, tension evolving from noise and physical effort, additional duties other than music, quality of school discipline, and unfavorable attitude of administration and/or faculty. More respondents left elementary vocal music than any other area and it was assumed that this was due to marriage by the large number of women involved. (Faculty Advisor: Irving Cooper).

194. Rhoades, Fordyce L. "An Evaluation of Measures for the Prediction of Success in Instrumental Music Study." Unpublished Master's Thesis, University of Washington, 1938. 73 pp. (M.A.).

A battery of nine tests and other sources of information were used in an investigation of instruments usable for the prediction of success in instrumental music for beginning students. The subjects were 114 seventh grade students who had indicated an interest in studying music. Each subject was ranked on the individual tests and a composite rank was calculated for each subject. Subjects having a poor attendance record were excluded after which 30 subjects were selected by stratified sampling on order to include all strata of scores on the nine tests. Subjects were then given equal instruction for one school year. At the end of the instruction period they were tested on musical ability by the investigator and one other judge. Rank correlations were then run between the musical performance ratings and the composite rank of each subject. A combination of the Seashore Pitch Test, Terman I.Q. Test, and a record of musical achievement proved to predict success in instrumental music to a relatively high degree. Of these three, I.Q. was observed to be the most significant factor. Character traits were less important than teacher ratings of musical ability. (Faculty Advisor: Kathleen Munro and Francis Dickey).

195. Richman, Luther A. "The Status of Music Education in the Public Schools of Virginia." Unpublished Doctoral Dissertation, University of Cincinnati, 1938. 255 pp. (Ed.D.).

A survey was made of music education in the schools of Virginia (1936-1937) with respect to (1) the agencies responsible for the financial support of the music program, (2) the type of teachers carrying on the music instruction, (3) the factors which were promoting or hindering the growth of school music work, and (4) the music materials and equipment which were available in the school situations. Four questionnaires were developed for securing information from the following groups of individuals: teachers from

schools having more than three teachers (N = 6, 401), high school principals, (N = 518) and division superintendents (N = 109). The data were grouped into Negro and white schools for comparisons and by geographical distribution (counties) and expressed in percertages. Teachers in the smaller elementary schools (one to three teachers) reported differing activities, equipment and competencies from those in the larger elementary schools (four or more teachers). Negro teachers reported approximately the same activities and competencies as did the white teachers in the respective size schools, although, they reported having less equipment. Secondary principals reported the present status in aspects of their music programs, while division superintendents also reported the status at the county and division levels. Reports also were summarized from teachers colleges, broadcasting stations, and the Virginia State Department of Teacher Certification. (Faculty Advisor: L. A. Pechstein).

196. Robins, Miriam C. "A Study of Variances in Private Piano Backgrounds of Selected Secondary School Students to Better Determine the Aims and Responsibilities of the Private Piano Teaching Profession." Unpublished Master's Thesis, University of Denver, 1959. 153 pp. (M.A.).

The aims and responsibilities of the private piano teaching profession were studied through an analysis of private piano backgrounds of students in secondary schools in Denver, Colorado, who were selected on the basis of their participation in school elective music groups. Questionnaires were distributed to 1,128 members of secondary school sponsored musical organizations. Replies were tabulated in frequencies and percentages. Subjects were grouped for analyzation into three groups: (1) those who were still taking piano lessons, (2) those who had taken lessons but stopped, and (3) those who had never taken piano lessons. Only upper and middle class schools were chosen. Relevant findings were that a large majority of the subjects were enrolled in only one school-sponsored musical organization. A high percentage of the subjects had experience in private music study other than piano. Over one-half of the subjects came from families in which at least one member had a musical background. It was concluded that private piano lessons were not a major influence upon later vocal and/or instrumental study. (Faculty Advisor: Daniel T. Moe).

197. Roe, Paul F. "The Internal Administrative Organization in High School Music Education." Unpublished Doctoral Dissertation, University of Nebraska, 1960. 240 pp. (Ph.D.). (Univ. Micro. No. 60-4510).

A status study was conducted concerning administrative practices in music education in the public schools of the North Central United States. Chairmen of each of the 19 state members of the North Central Association were requested to send the names of five outstanding public school music programs in their respective states. A questionnaire was constructed, pretested, and sent to the teachers of the recommended public schools. One hundred five replies were received. The data were analyzed in percentages. A check list was also devised and checked by experts. After revision, the checklist was used in personal visits to arbitrarily selected schools. Most music departments surveyed used extrinsic rewards such as letters or some type of award to motivate music students. The personnel for performance groups was selected in the following order of importance: tryouts, balance needed, recommendations, standardized tests, and grade level. About one-fourth of the cities employed a central circulating library for music. The third band, training girls' glee and advanced boys' glee usually met twice per week. Other groups met daily. Only one school reported group piano lessons and they were extra-curricular. Students were used to help the directors in ticket sales, library work, etc. Instruments were usually inspected twice a year, and uniforms and robes were cleaned once a year. Very few of the departments kept student practice records. (Faculty Advisor: Leslie L. Chisholm).

198. Rogers, Vincent R. "Children's Expressed Musical Preferences at Selected Grade Levels." Unpublished Doctoral Dissertation, Syracuse University, 1956. 159 pp. (Ed.D.). (Univ. Micro. No. 56-3047).

The musical preferences of children at succeeding grade levels and the factors which influence these preferences were investigated by means of a 57 item paired comparisons test which was constructed and tape recorded. A panel of experts was used in obtaining a list of selections categorized according to the categories developed by Keston--Serious Classical, Popular Classical, Dinner, and Popular. A short form of the test was compiled and administered for validity and reliability in a test-re-test procedure. The test was revised and administered to 635 school children in the fourth, seventh, ninth, and twelfth grades within a 50 mile radius of Syracuse, New York. Socio-economic data on the subjects were also obtained. The data were analyzed chiefly by the use of critical ratios. It was found that students of all ages from grades two through six, both sexes, and any socio-economic status tend to prefer popular music over any other musical category. This preference intensified as students mature being greatest at the high school level. Children from the upper socio-economic strata tend to have a greater preference for more serious music with diminishing intensity from the second grade to the twelfth grade but this preference remains significantly greater even in the high school years while children from suburban and rural areas do not differ in their patterns of preference. (Faculty Advisor: Clarence W. Hunnicutt).

199. Rubin, Louis. "The Effects of Musical Experience on Musical Discrimination and Musical Preferences." Unpublished Doctoral Dissertation, University of California at Berkeley, 1952. 208 pp. (Ph.D.). (Calif. Univ. Micro No. CU-147).

Students with a high degree of musical experience were compared with students having a comparatively low degree of musical experience to determine differences in musical preference and in the ability to determine technical variations in harmony, melody, and rhythm. Further, the investigator attempted to determine the effect of musical training and to determine the presence of differences resulting from various types of training. A questionnaire dealing with eleven areas of musical experience was subjected to an item discrimination analysis and reliability correlations. The questionnaire was administered to 903 students in the San Francisco Public Schools, grades seven, nine, and twelve. Tests of music preference and discriminatory ability were constructed, refined through a pilot study, and administered to the 150 high experienced and 150 low experienced students, as determined by the questionnaire. Musical experience appeared to have little effect upon musical preference, both groups showing a predominent interest in music of transient current vogue. Interest in folk music was highest among the seventh grade students, decreasing progressively to grades nine and twelve. Interest in art music tended to increase slightly from grade seven to twelve among the musically experienced subjects, while decreasing slightly among the musically inexperienced subjects. Student preference for art music and "current" music appeared to be negatively correlated. Musical experiences appeared to have a limited effect on discriminatory ability but within both groups there was improvement with age. Musical experience appeared to have very little effect with regard to facilitating the relative difficulty of the discriminatory factors of harmony, rhythm, and melody. (Faculty Advisor: J. Cecil Parker).

200. Scheuerle, Paul N. "A Study and Evaluation of Instrumental Music Programs in the Public Secondary Schools of the United States." Unpublished Doctoral Dissertation, Boston University, 1959. 449 pp. (D.M.A.).

The purposes of the study were (1) to determine the sources of income for the financing of public secondary school instrumental music, (2) to determine the principal expenditures of these instrumental music programs, (3) to survey and evaluate the existing conditions regarding the instrumental music programs, and (4) to present a recommended budget for the instrumental music program for schools of comparable sizes. A questionnaire was designed and refined. A complete 1951 listing of 23,757 secondary schools in the United States was used and from this listing questionnaires were mailed to five percent of the senior high schools. Random stratified sampling was used. Of 899 questionnaires sent, 481 were returned. The returns were fairly evenly divided throughout the nation. The data were analyzed in frequencies and percentages. The local boards of education were the primary sources of finances for instrumental music. A greater percentage of financial support from the boards of education was reported in the smallest schools.

The smallest percentage of support from boards of education was reported by the largest schools. Twenty other sources of income were also listed. The purchase of instruments was the principal expenditure for a majority of the schools. Other important expenses were for music, miscellaneous equipment, repairs, transportation, uniforms, adjudication and festival fees, and insurance premiums on the equipment. Means and averages of the schools (by size of enrollment) were given in the areas of community population, number of schools in the system, school policies, inventory, uniforms, instrumentation, and source and amount of funds. (Faculty Advisor: Jack Lemons).

201. Schmitz, Sylvester M. "An Investigation of the Prognostic Value of the Revised Seashore Tests and the Kwalwasser-Ruch Test of Musical Accomplishment for Academic Success in a Music Education Program." Unpublished Doctoral Dissertation, Northwestern University, 1956. 183 pp. (Ph.D.). (Univ. Micro. No. 57-4838).

An evaluation was made of the complete revised Seashore Measures of Musical Talents and the Kwalwasser-Ruch Test of Musical Accomplishment as to their efficiency in forecasting academic achievement of students majoring in music education. The subjects were 209 students who had graduated from Northwestern University with the degree B.M.Ed. from 1940-1947. Forty-two students had not completed their degree but were included in the study for comparative purposes. Test scores were obtained from the records kept by the University. Correlations were computed between test items and grades in the areas of applied music, music theory, music history, music education, and the total grade point average. All tests were taken by the subjects as incoming freshmen at the University. It was concluded that course grades below the mean can be predicted with greater accuracy than can course grades above the mean. Low correlations confirmed that the prediction of grades in the upper and lower quartiles through the test scores in those respective quartiles does not appear plausible. The B form of the Seashore Measures of Musical Talents was the most effective forecaster of grades of any of the tests or combination of tests employed in the study. The range of scores of the Kwalwasser-Ruch test was not sufficiently wide to be of adequate discriminating value for guidance in a college level music education program. The mean scores of the graduates and the non-completion group did not differ sufficiently to indicate that academic survival can be predicted.

202. Schroer, Albert W. "A Study of the Factors Influencing Students Choosing the Music Education Curriculum in College." Unpublished Doctoral Dissertation, Pennsylvania State University, 1956. 142 pp. (Ed.D.). (Univ. Micro. No. 57-451).

A survey was made of the factors in the backgrounds of selected college students which were believed to be largely responsible for their choice of the music education curriculum. A preliminary questionnaire was developed as a result of interviews with music education students, music teachers, and college music faculty members. The preliminary questionnaire was administered and revised. A final questionnaire was developed, and was administered to 328 undergraduate music education students in five colleges in the eastern United States. Positive or negative responses were elicited for the items, with the degree of influence of positive items being indicated on a 10 point scale. Analyses of the data were made through the use of the mean, standard deviation t ratio, and t ratio on the percent of difference. With respect to the music education majors' opinion, having a piano at home was found to be very important, particularly for the men. Playing instrumental solos was rated second in importance. Orchestra participation was rated relatively high. Student conducting had limited frequency but was rated high in importance. The school music teacher was found to have been most influential, with the private music teacher being second. Differences were found between the men and women in that the women indicated more influence from singing vocal solos, and singing in church choirs. For the men, dance band participation and playing in small ensembles as well as community or civic instrumental groups were rated higher. (Faculty Advisor: Hummel Fishburn).

203. Sell, Marion W. "Preference for Band or Orchestra as an Esthetic Medium for Music Among Public School Students." Unpublished Master's Thesis, University of Kansas, 1950. 57 pp. (M.M.E.).

The purpose of the study was to discover whether public school students have an esthetic tonal preference for music played by bands or for music played by orchestra. One hundred forty-four subjects, 66 girls and 78 boys, whose ages and grades were not stated, were randomly selected from nine student bodies in midwestern states. Five recorded excerpts were selected and paired so that the same excerpt was heard as played by both a college band and a professional orchestra. The pairs included one composition originally for band. Three for orchestra, and one for organ. Test materials were mailed to the nine teachers administering the test. Students were asked to state their preference in each pair and to indicate whether they thought it to be a band or orchestra. There seemed to be an esthetic tonal preference for music played by an orchestra rather than that played by a band. This seems to indicate that reasons other than the esthetic tonal preference are the contributing factors toward the decline of the orchestra. (Faculty Advisor: Gerald M. Carney).

204. Shadley, Maurice F. "A Study of the Instrumental Music Program in the High Schools of the State of Indiana (1949-50)." Unpublished Doctoral Dissertation, Indiana University, 1951. 295 pp. (Ed.D.).

A survey was made of the status of instrumental music instruction in the high schools of Indiana. Two questionnaires were constructed, evaluated by six specialists, revised and mailed to 710 high school instrumental music instructors and 100 principals. Returns were received from 360 of the 710 music instructors and from 60 of the 100 principals. The 710 teachers represented the entire population while the 100 principals were selected randomly. Returns were checked for area distribution and the results tabulated. The majority of bands and orchestras met on school time, the predominant period length being 50 minutes. Instructors in the smaller cities and rural areas were more likely to have piano or voice as a major performing media, while in the larger cities the tendency was toward orchestral and/or band instruments. The size of the band and orchestra did not appear to have a direct relationship to the size of the community. The percentage of girls in most bands ranged from 50 to 60 percent and in most orchestras from 50 to 60 percent. A majority of high schools had some budget for instrumental music, yet a large majority depended partially on resources other than the school budget for the purchase of instruments and equipment. Schools were more likely to lend instruments than to rent them to students. Heterogeneous instrumental classes were found more commonly than were homogeneous classes at the high school level. Schools in the smaller cities reported greater content participation than did those in the over 10,000. (Faculty Advisor: William H. Fox).

205. Shepard, Eugene L. "Measurements of Certain Nonverbal Abilities of Urban and Rural Children." J. Educ. Psychol., 33 (1942), 458-462.

One hundred-four pairs of urban and rural children, matched on chronological age, occupational level of parent, sex, and nationality, were given a battery of nonverbal tests to determine whether nonverbal differences exist between equated groups of urban and rural children. The tests used were the Kwalwasser-Dykema battery. There was an indication of rural superiority in musical ability as measured by these tests. The difference between means, however, was not statistically significant.

206. Shetler, Donald J. "The Content Evaluation of Selected Music Programs Produced for the National Educational Television and Radio Center." Unpublished Doctoral Dissertation, University of Michigan, 1961. 349 pp. (Ed.D.). (Univ. Micro. No. 61-1785).

The purpose of the study was to provide a valid instructional content evaluation of selected music programs produced by the National Educational Television and Radio Center. Students ranging in age from below 10 years to 22 years who were enrolled at the National Music Camp for the summer of 1959 and their instructors served as evaluators of the films. The film evaluation instrument was devised and criticized by the NET Research Council. Approximately 90 individual films from eight film series were shown. The evaluation format proved to be adaptable to all age levels and classes represented in the

population. Musical content and performance in almost all films were rated as high in quality. The fact that the narrator or host of the film was a well known musician or authority seemed to mean less to the young students than to the high school and college students. Students and teachers were quick to detect lack of relation of program content to the class that the film was intended to supplement. Subjects were critical of filmed performances without commentary. Teachers felt that individual program data supplied by NET were inadequate or misleading in some cases. Students and teachers agreed in most cases on the strongest and weakest features of the individual program. University students responded more favorably on production features than secondary school students and the younger students seemed most aware of faulty production. Only one series, "Opera for Tomorrow," attracted almost unanimous negative response. The most frequently occurring suggestion for improvement was in sound fidelity. (Faculty Advisor: Allen P. Britton).

207. Shull, Carl N. "A Study of Children's Vocal Literature Written by Selected Distinguished Composers." Unpublished Doctoral Dissertation, The Florida State University, 1961. 257 pp. (Ph.D.). (Univ. Micro. No. 61-3648).

An investigation of song literature written by distinguished composers was made in order to discover the scope and nature of music written for children's voices, and to make a study of the extent to which this literature is used in the current elementary series. The investigator studied Groves Dictionary..., musical biographies, bibliographies, etc. for references to children's vocal music. Letters were sent to 69 composers for information, answers being received from 44 composers. Selected compositions were studied in three songbook series with regard to range, tessitura, rhythm, melody, etc. The literature of distinguished composers was found to have the following characteristics: subtle in musical expression, avoiding the most obvious formal structure; a variety of styles from very traditional to those in the less traditional, 20th century idioms; texts from original, folk and anonymous sources; texts usually rhymed in a multitude of schemes and in regular and irregular metrical schemes, as well as being nationalistic, comical, religious, and sentimental. The investigator then indicated the inappropriateness of the literature for graded series: larger range requirements, extended periods in high or low tessituras, fragmentary melodies, difficulty of accompaniments, obvious intent for church use, difficulties of text translation, ownership of publication rights, and the recent completion date of some songs. (Faculty Advisor: Wiley Housewright).

208. Sievers, C. H. "The Measurement of Musical Development: II. A Study of Rhythmic Performance with Special Consideration of the Factors Involved in the Formation of a Scale for Measuring Rhythmic Ability." Univ. of Iowa Stu. in Child Welfare, 7:1 (1932), 111-172.

Phases of regulated simultaneous motor rhythm in elementary school children were studied. The Seashore Motor Rhythm Apparatus was modified for the presentation of the stimuli and a Hollerith Counter was attached for graphically recording the performances. From research by Williams, Seashore, Revesz, and others, difficulty criteria were established. Rhythmic patterns were selected and presented in order of difficulty. The speed of the stimulus presentation apparatus was checked and regulated by use of stroboscopic vision devices. Subjects were tested individually. The complex pattern, in terms of both failure and accuracy, was much more difficult than the simple equal periodicity. From the point of view of a graded scale of rhythmic performance, variation of pattern seems to be the most promising device for introducing difficulty at the upper ages for the age range studied. The difficulty of a test of motor rhythmic performance may be significantly varied by changing the pattern of the stimulus. Significant or fairly significant age differences appeared in the range studied. All patterns with unequal time divisions were given accents by all subjects who passed the pattern and there appeared one preferred grouping and accent for each pattern. The nature of the grouping seemed to depend on the configuration of the entire pattern, the accent, the relative position of long and short notes, and tendencies toward simplification being effective in one or another pattern. Intercorrelations of the various rhythmic patterns used show that no two patterns measure exactly the same thing but that there is considerable homogeniety in the

series. A scale for measuring rhythmic ability consisting of Patterns 1, 2, 3, 5, and 7 was proposed as the best measure in the light of the facts of this research.

209. Silverman, Herbert H. "A Comparison of the Keyboard and the Vocal Approach in the Teaching of Primary Music Theory." Unpublished Doctoral Dissertation, Boston University, 1954. 277 pp. (Ed.D.).

An experiment was conducted to determine whether the use of the keyboard and piano class techniques for all children would contribute positively to general music development through the five areas of activity (singing, listening, rhythmic, creative, and instrumental activities) in a well-balanced music curriculum. The Whistler and Thorpe Musical Aptitude Test, Providence Inventory Test in Music, and the California Tests of Mental Maturity (Short Form) were administered to all third and fourth grade students in one city (N=1,304). From this group, 362 students were selected for an experimental group and matched in terms of the above tests with 362 students assigned to the control group. Instruction was given in 50 lessons over a period of 10 weeks. The reliability coefficient was computed for the Providence Inventory, and pre-and-posts tests of the Providence Inventory were computed. Critical ratios were computed in terms of experimental instruction and sex. The possible relation of I.Q. and music aptitude was investigated. Though within each of the control and experimental groups gains were statistically significant, the difference in gains between the methods was not found to be significant. In terms of I.Q. scores, the various quartiles for both grades three and four did not differ significantly in musical achievement, nor in gain in musical achievement. The boys and girls did not appear to differ significantly in musical achievement. (Faculty Advisor: B. Alice Crossley).

210. Silvey, Clel T. A Study of Personal Reactions to the Solmization Method of Teaching Music Reading. ("Peabody College Contr. Educ."). Nashville, Tennessee: George Peabody College for Teachers, 1937. 82 pp. (Ph.D.).

Personal reactions were studied with respect to the retention of solmization in post-junior high school choral groups (senior high school choruses, college choral groups, community groups, etc.). A total population of 1804 subjects were chosen from high school, college, and amateur adult populated choral organizations. All subjects had been taught by the solmization method when in elementary school. Each choir sight-read a newly published composition which was directed by the investigator after which a questionnaire was completed by each member. This same procedure was followed with respect to the group of selected singers. Reliability of the questionnaire was determined by a test-retest of 75 subjects after a one year time lapse. Coefficients ranged from .75 to .90 on the subjects' first three choices of helpful sight reading factors. Total ratings of all subjects were analyzed by percentage differences corrected for probably error of percent difference. Inter factor comparisons were made between the total population and the select group by use of the critical ratio. Solmization was rated fourth as a contributing factor in music reading by high-school students and rated fifth by college and church-municipal choir members. The general opinion in the small select population concerning the values of solmization in music reading was the same as the general opinion in the total population. (Faculty Advisor: Paul L. Boynton).

211. Simmons, Donald W. "The Motivations and Musical Backgrounds of Participants and Non-Participants in Selected Community Choruses." Unpublished Doctoral Dissertation, University of Illinois, 1962. 121 pp. (Ed.D.). (Univ. Micro. No. 63-3333).

A survey was conducted to determine whether participation in a community chorus is related to the musical background of the participants. The critical incident technique was used on one community chorus, and questionnaires were developed - one for community chorus members and one for non-participants. Personal visits were made to 15 community choruses and 982 members were contacted. The chorus members were requested to complete their questionnaires and to give the other to a non-participating acquaintance of the

same sex who was comparable to the chorus member in marital status, occupation, socio-economic background, age, and locality. The data were analyzed in frequencies and percentages. The musical backgrounds of chorus members were characterized by an increasing exposure to a wider variety of musical activities as they progressed through the levels of education. The background of chorus members include relatively little instrumental performance. Vocal music performance groups were the dominant musical factors in the background of chorus members. Musical performance activities outside of school reflected a similar vocal experience pattern. There was a high incidence of private piano instruction and concert attendance reported by chorus members. Non-chorus members were less active in high school music than chorus members and they seldom participated in either community or informal instrumental activities. In spite of the above, there were no specific factors in the musical backgrounds of respondents which determined participation or non-participation in community choruses. The primary reasons non-members gave for not participating were time restrictions, schedule conflicts, and the fact that they felt unqualified to participate. (Faculty Advisor: Charles Leonhard).

212. Sims, Francis J. "An Experimental Investigation of the Relative Effectiveness of Group and Individual Voice Instruction at the Beginning Level to High School Students." Unpublished Doctoral Dissertation, University of Oklahoma, 1961. 197 pp. (Ed.D.). (Univ. Micro. No. 61-4902).

A comparison was made between the effectiveness of group and individual voice instruction at the beginning level for high school students. Of the 27 students selected as participants in the study, 21 completed the experiment. The investigator arbitrarily assigned students so that the results formed a class of six girls, a class of six boys, a mixed class of six students, and nine students who studied privately. The assignments were based upon results of the Whistler and Thorpe Musical Aptitude Test. The investigator did all of the teaching. Criteria were established for evaluating the students and three college music instructors were selected to evaluate the students at the beginning, at the end of 14 weeks of instruction, and at the end of the study. The two-, three-, and four-way analysis of variance were employed to test the investigator's null hypotheses. The variables under consideration were three evaluations, three adjudicators, type of instruction (class-private), and evaluative criteria components. It was concluded that class-taught students were not lower achievers than were private-taught students; thus, they must have been equal to or superior to the private-taught students. Adjudicators were found to disagree on subjective evaluation, but to be consistent with themselves in the evaluation scores they gave. The mixed class of both boys and girls created an atmosphere which was more conducive to learning than did either of the other two classes. (Faculty Advisor: Gail Shannon and Glenn R. Snider).

213. Skornicka, Joseph E. "The Function of Time and Rhythm in Instrumental Music Reading Competency." Unpublished Doctoral Dissertation, Oregon State College, 1958. 83 pp. (Ed.D.). (Univ. Micro. No. 58-3059).

An experiment was conducted to determine whether an early and constant emphasis on time and rhythm would significantly improve instrumental music reading. A control group of 72 elementary students was equated with an experimental group of 77 elementary students by means of the Drake Musical Aptitude Test. Each of five teachers taught both a control and sub-group and an experimental sub-group. The experimental groups used materials which were especially adapted to the counting of time and recognition of rhythm patterns. The control groups were taught by the conventional method used by the participating teachers. The investigator constructed and administered two music reading tests. The first was administered at the beginning of the experimental period, the second at the middle of the experimental period. The Watkins-Farnum Performance Scale was administered at the end of the eleven week experimental period. The critical ratio technique was employed for the test of significant difference. The method of instruction that emphasized time and rhythm in early training developed more competent music reading than methods that did not provide this emphasis. Emphasis on time and rhythm which combined the tonguing and playing of quarter notes and rests as the initial units of time as well as the tapping of the foot and playing on the march as the physical response to the beat, appeared to

develop a stronger feeling for the beat and produced more competent instrumental music reading than the method which did not include these procedures in training. (Faculty Advisor: Robert R. Reichart).

214. Smiley, Edra M. "A Study of the Musical Configurations, Symbols, Terms, and Words found in Basic Music Texts at the Fourth Grade Level." Unpublished Doctoral Dissertation, Indiana University, 1955. 226 pp. (Ed.D.). (Univ. Micro. No. A55-2171).

Two aspects of fourth grade music text books were studied: (1) melodic sight reading, and (2) communication from the textbook by symbol, term, and word. Four textbooks (The American Singer, New Music Horizons, Singing Every Day, and Together We Sing) were selected for analysis because of the frequency of their use. Information was obtained regarding melodic configurations, music symbols, and English words used having musical connotations. The appropriateness of the words for the age group was determined by the use of the Thorndike and Lorge word list and the Thorndike Barnhart Beginning Dictionary. The data were expressed in frequency distributions. The texts evidently had not been prepared according to a previously compiled list of melodic configurations. Great use was made of the scale and tonic chord arpeggios in melodic configurations. Dominant and subdominant chord progressions (in an arpeggiated melody) were next in frequency of use while very sparing use was made of chromatics and the minor tonality. Of the 45 foreign music terms used in the four textbooks, only three (f, p, and pp) were common to all four. All textbooks contained at least one song in the major keys ranging from "C" to those in four sharps and four flats. The number of symbols used in each text were as follows: 44 in New Music Horizons, 17 in Together We Sing and New Music Horizons, and 11 in The American Singer. Accidentals were used in all four texts. The American Singer used only raised tones and the other texts used more raised tones than lowered tones. Some words were not necessarily meaningful at the fourth grade level when used in a specific musical sense, because the musical definition could not be found in a fourth grade level dictionary. (Faculty Advisor: William H. Fox).

215. Smith, Samuel. "Music Supervision in Connecticut Public Schools." Unpublished Doctoral Dissertation, New York University, 1933. 2 Vol., 772 pp. (Ph.D.)

Case studies of 24 school systems were conducted for the purpose of discovering the status of music education practices in Connecticut (1933). Comparisons were made between c. 1920 and 1931 Connecticut schools with respect to population, average daily attendance (A.D.A.), taxable wealth per pupil in A.D.A., average tax receipts per pupil in A.D.A., percentage of tax receipts devoted to schools, total school expenditures per pupil in A.D.A., expenditures for music instruction, time devoted to music in minutes per pupil per week, number of elementary schools, number of one-room schools, number of grade teachers, and the average salary of grade teachers. (Faculty Advisor: Alonzo F. Myers).

216. Smith, William O. "An Analysis of the Music Education Programs Administered by the North Central States' Departments of Education." Unpublished Doctoral Dissertation, The State University of Iowa, 1957. 155 pp. (Ph.D.). (Univ. Micro. No. 57-4840).

An analysis was made of the structure, personnel, policies, and procedures of the responsible subdivision for music education in the state departments of education in the ten states of Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. Sources of information were bulletins, syllabi, courses of study, a questionnaire submitted to the head of music education for the state or to the chief state officer of instruction, and interviews with state department personnel. Three of the ten states (Illinois, Ohio, and Wisconsin) had state supervisors of music. Illinois, Indiana, and Ohio had specific laws requiring music in the public schools. No state supervised a testing program in music and there was no consistent pattern of state publications concerning music. Most states did sponsor audio-visual aid projects. Most department divisions responsible for music education gave some form of guidance to the teacher education program, but it was primarily a responsibility of

the teacher training institutions. Only states with state supervisors of music maintained public relations programs for music education as a part of state department activities. The supervision of curriculum standards in music was generally accepted as a state department responsibility, as was coordination and supervision of music with other subjects. (Faculty Advisor: Neal E. Glenn).

217. Smith, Yevola R. "An Investigation of the Availability and Utilization of Audio-Visual Materials in General Music Classes in Selected Maryland Public Junior High Schools." Unpublished Master's Thesis, Boston University, 1957. 105 pp. (M.M.).

The purposes of the study were to (1) ascertain the availability of audio-visual materials to general music programs in selected Maryland public junior high schools, (2) to indicate the extent to which specific materials were used, (3) to present teachers' attitudes with regard to the values derived from the use of audio-visual materials, (4) to investigate audio-visual materials which are recommended for use in junior high schools, and (5) to compare materials which the survey showed currently being used with those recommended and available for use. Questionnaires were sent to an arbitrary sample of 73 junior high school principals in Maryland. The principals were asked to distribute questionnaires to two general music teachers of the school, if there were more than one in the school. Fifty-one questionnaires (from 40 schools) were returned and used in the analysis. Music teachers were aware of audio-visual materials and were using those recommended by organizations which were concerned with the values of audio-visual materials as media of communications. The study showed that the available materials were utilized greatly by general music teachers of Maryland public junior high schools. (Faculty Advisor: Jack Lemons).

218. Smyers, Myllan. "The Status of Music in the Elementary Schools in West Virginia." Unpublished Doctoral Dissertation, Indiana University, 1955. 171 pp. (Ed.D.). (Univ. Micro. No. A55-2172).

A survey was made of music instruction in grades one through six in the public schools of West Virginia. A sample of 1,200 elementary classroom teachers, stratified by school size, were sent questionnaires, 348 being returned. The distribution of the responses was relatively even throughout the state. The data were analyzed in frequencies and percentages. About 90 percent of the music was taught in the regular classroom with less than 10 percent of the music being taught in a special music room. Over two-thirds of the teachers did not have use of a piano. Record players were available to more than 75 percent of the teachers. No equipment was available to 41 percent of the teachers in one-room schools. Recordings of folk songs were available in over 50 percent of the schools while other types of recorded music were considerably fewer. The state adopted music series was used in slightly more than 50 percent of the schools as the basic text. Audio-visual aids headed the list of needed teaching materials. A large percentage of the teachers had not completed the required six semester hours of college music. (Faculty Advisor: William H. Fox).

219. Snapp, Kenneth O. "Development of a Musicians Interest Inventory for Use in Vocational and Educational Guidance." Unpublished Doctoral Dissertation, Indiana University, 1953. 239 pp. (Ph.D.). (Univ. Micro. No. A53-1530).

The investigator constructed an interest inventory with scales for use in counseling college level music students of sophomore or junior standing, and validated the interest inventory by applying it to a large sample of men in the following specialized fields of music: teacher of college theoretical music courses, teacher of college level applied music courses, teacher of public school music, and professional symphony musician. Through a preliminary investigation, opinions of a number of music teachers were obtained regarding differences which they thought might exist between music teachers at various levels. From these statements a rating scale evolved and was tested by 18 graduate students. A pilot interest inventory was devised in the form of an experimental adaptation of the Kuder Preference Record and was tested. A modified version of techniques advocated by

Strong also was used in the construction of a new interest inventory. The instrument was evaluated following administration to 472 college teachers, 391 public school teachers (all male), and 298 professional symphony musicians. The Musicians Interest Inventory displayed a high reliability (r=.93). Public school music teaching was the least preferred position among the four speciality groups. Only 41 percent of the public school music teachers rated it their first choice and one percent of the other three groups preferred it. The four scales differentiated well between every combination of music specialty groups except the college theoretical and the college applied music teachers. Average correlation was -.27. The college applied music teacher scale did not differentiate as well as the other three. (Faculty Advisor: Thurber H. Madison).

220. Snyder, Jack F. "Techniques and Practices for Effective Supervision of Student Teachers in Music." Unpublished Doctoral Dissertation, The University of Nebraska, 1961. 208 pp. (Ed.D.). (Univ. Micro. No. 62-138).

Questionnaires were used to survey student teaching practices in music at 30 four-year teachers' colleges and universities in Nebraska and six bordering states. Of the 36 institutions solicited, 30 provided a list of 215 cooperating teachers. Twenty-eight of the 36 directors of student teaching also returned questionnaires. It was found that less than 50 percent of the respondents indicated that teaching experiences were provided prior to student teaching. General education professors supervised the student teacher in music at six of the institutions. Seventy-five percent of the respondents reported that the student teacher spent at least one period per day in actual classroom teaching. The student teacher was visited by the campus supervisor from a minimum of once to a maximum of every day per student teaching term. The greatest number of cooperating teachers held the M.M.Ed. degree and had taught from six to ten years. (Faculty Advisor: Merle A. Stoneman).

221. Soares, Louise M. G. "Adjustment of Music, Science, and Physical Education Majors in Teacher Training." Unpublished Doctoral Dissertation, University of Illinois, 1962. 159 pp. (Ed.D.). (Univ. Micro. No. 63-3340).

A comparison was made in relative adjustment between music majors, science majors, and physical education majors enrolled in a college teacher education program. The MMPI Scale and an adaptation of an instrument by Bass and Fiedler were administered. The analysis of variance, Duncan's multiple comparisons test, correlations, and chi square were employed in the data analysis. No significant differences were found in the relative degree of adjustment indicated from the "self concept", "ideal concept", and "reflected self" scores of music and science majors. Both music and science majors reflected a less-enhanced feeling of personal worth due to a "frivolous" choice (by society's standards) of major by music students and a "second best" choice (by personal standards) of major by science students. Music Education majors appeared to have a somewhat lower personality formulation of how they appeared to others than did the two other groups. There was no statistically significant difference in the relative degree of adjustment indicated from the discrepancy scores (self-ideal, ideal-reflected, self-reflected) of music, science, or physical education majors. The dyadic scores (Bass-Fiedler technique) did not differentiate the sub-groups in the study. Music education majors revealed a poorer pattern of adjustment than did physical education majors. (Faculty Advisor: Norman E. Gronlund).

222. Sperry, Gale L. "A Study of Music Education Graduates from the University of Minnesota (1947-1956) with Particular Reference to Their Participation and Persistence in the Profession." Unpublished Doctoral Dissertation, University of Minnesota, 1958. 268 pp. (Ph.D.). (Univ. Micro. No. 58-2162).

Graduates in music education from the University of Minnesota (1947-1956) were surveyed concerning their participation and persistence in the music education profession. The subjects for this study were 127 men and 122 women who had graduated with the B.S. degree in music education. Questionnaires were constructed, reviewed by five professors, revised, and mailed. Responses were received from 213 subjects. Additional data were

obtained from the college files. Frequencies and percentages were employed in the data analysis. The majority of the respondents were teaching in Minnesota. Subjects who had members of their immediate families in the teaching profession tended to remain teachers. Continuance of college work while employed as a music teacher was a factor of importance in identifying those who remained in the profession. For men and women of similar experience and educational background, there was little difference in the salary earned as music teachers. Most of the women taught vocal music, while most of the men taught instrumental music. A majority of the men who left the profession reported doing so either for financial or military reasons. (Faculty Advisor: Gordon M. A. Mork).

223. Stanton, Hazel M. and Wilhelmine Koerth. "Musical Capacity Measures of Children Repeated after Musical Training." Univ. of Iowa Stu., Series on Aims and Progress of Research, No. 42, 1933. 48 pp.

The effect of three to nine years of private instruction upon scores earned on the Seashore tests was investigated in this study. The Seashore Battery was given to 645 subjects at three year intervals as they progressed from day school to college age. The test-re-testing covered a nine year span. Of the original group only eleven subjects were available for the final testing. Semi-annual talent ratings of the subjects were obtained from their instructors. Each subject took private music instruction from the Preparatory Department, Eastman School of Music. Few observable differences in the measurements of boys and girls were found. There was a gradual rise in the percentage of non-fluctuation in scores as the educational levels rose. The raw scores showed more competency as the higher levels of development were reached. A larger percentage of children showed raw score gains rather than losses in the first two re-test situations. The distribution curves of raw scores showed increased tendencies toward coincidence as the various groups approached maturity. Regardless of the length of time of music study, the mean increase in test scores decreased with educational progress. The standard deviation in all sub-tests was greatest for the pre-adolescent group and least for the adult group. From raw scores transferred into centile ranks, norms were established for indicating a child's relative position in his grade group compared with his relative position in successively higher grade groups.

224. Steg, Olaf W. "Student Teaching for Music Majors." Unpublished Doctoral Dissertation, Northwestern University, 1948. 251 pp. (Ph.D.).

Questionnaires surveying the status of student teaching were sent to 202 institutions. The 123 institutions returning the questionnaire were grouped into five categories: (1) publicly supported colleges and universities, (2) private universities, (3) state teachers colleges, (4) private liberal arts colleges, and (5) conservatories. Three questionnaires were devised. One was sent to administrators of music education departments, another to 250 critic teachers with 152 responding, and a third to 410 recent graduates with 218 responding. The data were analyzed in frequencies and percentages. In 75 percent of the institutions, music majors took student teaching under complete or partial supervision of the same person who taught them in music methods. The number of semester hours required in music student teaching was governed by the state boards of education for certification. The number of grade levels at which music majors were required to teach varied from one to four with two levels most often indicated. Critic teachers and music major graduates felt that a wider variety of assignments was needed. One-third of the colleges used only institution-operated campus schools; two-thirds used public schools; very few parochial schools were used for student teaching assignments. Critic teachers had the primary responsibility for student teaching in most institutions. Conferences and evaluation were infrequent and irregular between critic-teacher and student-teacher. Conferences between faculty and student teachers usually were held one hour weekly. Self-evaluation as well as the critic-teacher's evaluation of students' work was most often used in evaluation. Fifty percent of the student teachers were required to make lesson plans. Most student teachers were permitted to choose their own materials. Less than ten percent of the student teachers helped plan or prepare groups for public performance. (Faculty Advisor: John W. Beattie and Shirley A. Hamrin).

225. Steg, Olaf W. "The Total Work-Load of High School Music Teachers in Michigan." J. Res. Music Educ., 3 (Fall, 1955), 101-118.

An analysis was made of the music teacher's total activity or "teaching load." Questionnaires were constructed and sent to an arbitrary sample of high school vocal and instrumental teachers who were members of the Michigan Band and Orchestra Association or the Michigan School Vocal Association. Of the 725 questionnaires mailed, 345 usable returns were received. Median salary comparisons were made as follows: instrumental teacher, vocal teachers, and vocal-instrumental teachers. Teachers were asked to indicate the intensity of their feelings of strain or tension in their work as being: little, moderate, or considerable. The teachers were asked to estimate the weight of their teaching loads. A majority of the respondents taught elementary or junior high, or both, in addition to high school, and taught in towns of 10,000 or less. The median salary in cities of from 10,000 to 30,000 was $4,900, while in towns of 100 to 2500 the median salary was $3,800. When comparing the salaries of teachers with the degree of job satisfication, the following percentages of respondents replied that they enjoyed their teaching assignments very much: 16 percent in the $2,400-$3,000 range, 43 percent in the $3,001-$4,000 range, 62 percent in the $4,001-$5,000 range and 77 percent in the range above $5,000. Forty-nine percent indicated "little or moderate strain," and 51 percent indicated "considerable strain." Degree of perceived strain had a negative relationship to salary. The teachers' general estimate of teaching load was as follows: light - 17 percent, reasonable - 41 percent, heavy - 39 percent, and extremely heavy - 19 percent.

226. Stene, Agnes N. "A Survey of the Extent of Participation in Choral Music Classes Offered to California Junior High School Pupils in the Accelerated Academic Program." Unpublished Master's Thesis, University of Washington, 1961. 62 pp. (M.Ed.).

A survey was made of the participation in choral music classes by California junior high school pupils in the accelerated academic program of the state of California. A questionnaire was constructed and sent to all 82 junior high schools which were in school districts having a total enrollment of 40,000 or more. Returns were received from fifty-two schools (62 percent) in six school districts. The results were tabulated and expressed in percentages. More than 90 percent of the schools participating in the survey included an accelerated academic program in the curriculum. Election of one or more music classes was permitted at the following levels and occurred in the following percentages: 7th grade - 75 percent; 8th grade - 85.5 percent; 9th grade - 91.7 percent. The percentages of accelerated academic pupils electing one music class were as follows: 7th grade - 22 percent; 8th grade - 29.4 percent; 9th grade - 20 percent. The election of two music classes was permitted as follows: 7th grade - 8.3 percent; 8th grade - 10.4 percent; 9th grade - 6.3 percent. The percentages of accelerated academic pupils selecting two music classes were as follows: 7th grade - 1.2 percent; 8th grade - 1.6 percent; 9th grade - 1.2 percent.

227. Stephenson, Jack R. "A High School Music Cirriculum Planned in Terms of the Cultural Pattern of a Community and the Needs of High School Youth." Unpublished Doctoral Dissertation, University of Kansas, 1955. 285 pp. (Ph.D.).

The purposes of the study were (1) to investigate the pattern of musical culture in the community of Lawrence, Kansas, (2) to determine from the emergent attitudes and activities the musical needs for the high school students of Lawrence, and (3) to determine the curriculum, equipment, and school plant necessary to meet these needs. A study of Lawrence, Kansas, based on Lynd's Middletown was conducted in the areas of community, history, social strata, economic status, educational status, and musical activities. A "pattern of needs" was developed. Parents, for the most part, used music in their lives and were desirous that it be a part of their children's lives. They felt that the specialized groups were rapidly approaching a limit in terms of expansion but that much attention should be given to general music activities. At least one-third of the total students participated in special music groups while two-thirds of the high school students participated in special music groups while two-thirds of the high school students participated in specialized music groups. Over one-half of the community atten-

ded churches where group singing was an integral part of the service. Participation by high school students in music groups within the churches was less than that probably desired by the ministers. Popular music and incidental music was the most preferred type of music of the entire community. High school teachers (non-music) favored limiting performing organizations and emphasizing general music. (Faculty Advisor: E. Thayer Gaston).

228. Stokes, Charles F. "An Experimental Study of Tachistoscopic Training in Reading Music." Unpublished Doctoral Dissertation, University of Cincinnati, 1944. 206 pp. (Ed.D.).

A study of achievement in music reading was undertaken with the use of tachistoscopic training which consisted of short exposures to musical units of increasing difficulty. The subjects were 160 seventh and eighth grade students in one school who were paired with another 160 students in terms of their scores on the Knuth Achievement Test in Music. Random selective procedures were employed to designate which member of each pair would be assigned to the experimental group. None of the control or experimental groups had studied music privately. For the small group of instrumentalists, a sight-reading test was constructed. The instrumentalists were paired as to score on the Knuth test and instrument played. Instruction was given using a lantern slide projector and lantern slides (40 for each of 20 lessons). A test, based on the material in lessons 6-20, was given before lesson 6 and at the end of the experiment. An equivalent form of the Knuth test was administered to both the control and experimental groups. The data analysis included the use of the Fisher method for determining the significance of mean changes (t test). Training in the recognition of musical materials during short exposures resulted in improved span of recognition in reading these materials. Such training had no effect upon general achievement in reading music. A subordinate question was answered in that it was possible to measure the sight reading of certain kinds of music by instrumental players using the device developed for the study by the writer--the index of sight reading performance. (Faculty Advisor: Gordon Hendrickson).

229. Streep, Rosalind. "A Comparison of White and Negro Children in Rhythm and Consonance." J. Applied Psychol., 15 (February, 1931), 53-71.

The investigator's purpose was (1) to determine whether differences exist in the senses of rhythm and consonance between white and Negro children, and, if so, the extent of these differences, (2) to determine whether sense of rhythm or consonance bears any relationship to intelligence and, if so, the extent of this relationship, and (3) to determine whether the application of the Seashore tests of Rhythm and Consonance are suited to children of the third and fourth elementary school grades. Stratified sampling was employed obtaining a sample of 678 Negro and 637 white school children from grades three through six and from comparable environmental backgrounds. All subjects were from New York City school systems. The two racial groups were equated within grades. Skin color served as a biological differential in selection of the Negro sample. Colored hybrids and Negroes apparently approaching pure-blood stock were all classified in the Negro category. The Seashore Rhythm and Consonance tests were administered to the subjects and I.Q. scores were obtained from school records. Statistical comparisons between the groups were made. Negroes achieved a slight superiority over whites in the two musical areas investigated but the differences were small. The difference between median scores of fourth grade whites and fourth grade Negroes in rhythm was 2.79. This large difference may be attributable to differences in maturity between the groups.

230. Strub, Paul. "The Undergraduate Characteristics of Successful Public School Music Teachers." Unpublished Doctoral Dissertation, University of Kansas, 1957. 195 pp. (Ed.D.).

An analysis was made of undergraduate characteristics which might distinguish between successful and not successful public school music teachers. Subjects were chosen from music education majors who had graduated within a 25 year period from Northeast

Missouri State Teachers College. Sufficient records for the study were found for 75 of the 105 graduates who were still teaching. Teaching success was determined through the use of rating scales by respective school administrators and three college faculty members who had taught at the college for at least 25 years. Undergraduate records, activities, etc. were obtained from campus files and a questionnaire. Data analyses consisted of correlations and t tests. The groups tested comprised the highest and lowest quartiles with respect to teaching success. Individual prior ratings correlated at the .01 level of significance with the mean success ratings of all subjects. The top quartile group was found to be significantly higher than the lowest quartile group on the following variables: age, years of teaching experience, years of marriage, percentage of M.A. degrees, pre-college out-of-school music training, college grades in general, college music theory grades, undergraduate membership in professional and honorary organizations. No significant differences were found on the following variables: postgraduate membership in organizations, kind of pre-college in-school music training, college grades in applied music and student teaching, undergraduate membership in social organizations, number of years of college level private lessons, band, orchestra, or choir membership, nor in the stand held in a performance group at the college level. Very little had been published by either quartile group. (Faculty Advisor: E. Thayer Gaston).

231. Sur, William R. "Experimental Study of the Teaching of Music Understanding by Radio." Unpublished Doctoral Dissertation, University of Wisconsin, 1940. 314 pp. (Ph.D.).

The purposes of the study were (1) to organize and develop a radio course in music appreciation for students in grades nine through twelve, (2) to evaluate the course, and (3) to revise the course and to apply the revised course for comparative purposes. The course was broadcasted on an educational radio station during the school day. Supplementary teaching materials and tests were sent to cooperating teachers and the 1417 subjects were pre-and-post-tested. Teachers evaluated the program and their evaluations were used in revising the course. A comparative two week study was made of the effectiveness and suitability of two units in the revised course at the junior and senior high school levels using a control and an experimental group which was pre-and-post-tested. The data were analyzed in distributions, mean differences, and critical ratios. Radio lessons were effective and interesting to the mass of junior and senior high school students and there was a statistically significant gain in knowledge by all groups of students involved. There was no significant difference between student gains by the radio lessons and gains by traditional classroom methods. Teachers expressed the opinion that the course should be required at the junior high level but elective on the senior high level. Subjects who had studied music in performance areas did not perform better on the tests than non-performers. (Faculty Advisor: A. S. Barr and Matthew H. Willing).

232. Sur, William R. Piano Instruction in the Schools. Chicago: Music Educators National Conference, 1949. 63 pp.

A survey of piano instruction in the schools was conducted by means of questionnaires which were mailed to a sample of public schools throughout the United States. The sample was stratified by city size, population and geographic location. The data were analyzed in frequencies and percentages. A total of 9,708 questionnaires were sent, 4,447 being returned. An insufficient number of responses were obtained from cities with populations over 500,000 and were thus omitted from general conclusions. Where piano class instruction was given, it was available to all students in all types of schools to about the same extent. The larger groups of piano students in the highest proportion of cases were found in the elementary schools; the proportion was lower in the South and the West. It was concluded that piano instruction was limited to relatively small groups in many school systems of the South. A similar conclusion cannot be drawn for the West, because too few of the school systems responding reported piano instruction in the elementary schools. Elementary schools used class piano instruction to a greater extent than junior high or high schools. Of the 3,787 school systems who did not offer piano instruction, the reasons given, by order of frequency, were lack of funds, lack of instructors, lack of space, time conflicts with other classes, deprivation of private teachers of a livelihood,

concentration on other instruments and voice, and, least, teachers inadequately prepared.

233. Swanson, Frederick J. "Voice Mutation in the Adolescent Male: An Experiment in Guiding the Voice Development of Adolescent Boys in General Music Classes." Unpublished Doctoral Dissertation, University of Wisconsin, 1959. 310 pp. (Ph.D.). (Univ. Micro. No. 59-6977).

The purposes of the study were (1) to determine what factors in the phenomenon of voice mutation may affect the learning outcomes in vocal music classes, and (2) what methodology will better meet the needs of adolescent boys during this period, resulting in better learning outcomes in acquired skills, knowledges, and attitudes. A group of eighth grade boys were chosen arbitrarily as subjects and were placed in experimental (N=87) and control (N=100) groups. The groups were equated in chronological age, I.Q., and parental occupational status. Critical ratios were used to test the similarity of the groups on these variables. The measures employed included the Davenport Scale (physical maturity), tests of singing range and musical knowledge, attitude scale (reliability measured by Rho correlations), and a questionnaire. The experiment extended over a nine month period. It was concluded that the experimental method produced a more favorable attitude toward and a greater interest in music. The majority of the boys preferred separation from girls in music class (experimental procedure), enjoyed singing songs in the bass clef register, and enjoyed experimenting with the falsetto voice. Between September and May the boys in the experimental group showed a mean gain in the musical knowledge test scores while neither the girls nor the boys in the control groups made any appreciable gain in mean scores. (Faculty Advisor: Robert Petzold).

234. Swinchowski, Albert A. "A Standardized Music Achievement Test Battery for Intermediate Grades." J. Res. Mus. Educ., 13:3 (Fall, 1965), 159-168. (Manuscript, 1962).

A music achievement test battery was developed based upon three sources: (a) the recommendations of the leading authorities in elementary music education, (b) a survey of 35 courses of study published by state departments and large city school systems, and (c) the principal music texts in current use. The test framework included four subtests in rhythmic activities, listening activities, creative activities, and music reading. The test items were evaluated by three experts in elementary education. A pre-test was run and a pilot study of 160 items was made using 240 pupils in grades four, five and six. The reliability for the battery was estimated by the Kuder-Richardson method of rational equivalance, ranging from r=.62 to r=.57. Using teachers' ratings of pupils' achievement and the chi square technique, the goodness of fit for the test was significant at the .05 level. An item analysis was made after which those of low discriminating power and excessive difficulty were eliminated. The final form of the test included 92 test items and 39 practice items. It was administered to 1,622 pupils in 62 intermediate grade classes. The differences in the increments of increase in mean scores between successive grades was significant for all four subtests. The reliability coefficients as calculated by the Kuder-Richardson formula were found to be low (.23 to .48) for the separate tests at each grade level. The combined scores of the subtests for all grades had a coefficient of .68. The logical validity of the battery was accepted on the assumption that the criteria used in the construction of the battery are valid goals for classroom music. The application of the chi square for goodness of fit led to the conclusion that there is a relationship between the scores earned by pupils and the teachers' ratings of those pupils.

235. Tarpley, Harold B. "An Experimental Study in the Use of Motion Picture Music in the Junior and Senior High School Music Class." Unpublished Master's Thesis, University of Kansas, 1954. 126 pp. (M.M.E.).

The purposes of the study were (1) to determine the possibility of organizing and presenting in junior and senior high school classes a unit of instruction concerning film music for developing in students a greater discrimination in and awareness of film music, and (2) to develop in students a growth in factual knowledge about film music

composition greater than that derived from informal out-of-school experiences with the medium. A chance procedure was used to designate the experimental and control groups. An Initial Factual Knowledge Test was administered (reliability +.25). The experimental approach consisted of (1) listening to recorded excerpts from motion pictures; (2) listening to and viewing two motion pictures; (3) listening to recorded musical excerpts from these films, followed by a discussion of musical effects; (4) taking notes on demonstration lectures about techniques involved in film music composition; and (5) taking notes on anecdotal biographies of film composers. The data analyses was performed by means of t tests, analysis of variance and analysis of covariance. Students who received instruction were not better able to judge the appropriateness of the mood relationship between music and the visual scene. Students who received instruction were not better able to appraise the musical content of the film score. Students who received instruction were able to gain more factual knowledge about film composers and their techniques. Students who received instruction did gain more insight into the nature and purpose of film music and more knowledge of specific film music compositions. (Faculty Advisor: Melvin L. Zack).

236. Taylor,Corwin H. "Prevailing Practices in the Supervision of Instrumental Music." J. Res. Music Educ., 10:1 (Spring, 1962), 30-38.

A survey was made of prevailing practices in instrumental music supervision in cities of 100,000 or more population within the United States. From an initial inquiry, 44 cities were selected arbitrarily for the study. A description of practice in Baltimore was printed and sent to the administrator of the 44 public schools. The respondents were requested to respond orally and record their reactions on a tape recorder. Practices were divided into nine areas: Philosophy, Organization, Curriculum, Personnel, Performances, Library and Materials, Equipment, Facilities and Statistics. Data were analyzed in frequencies and percentages. The following is a list of prevailing practices in instrumental supervision: (1) most teachers were required to teach all instruments, exceptions usually being string teachers; (2) secondary school teachers were usually assigned full time per school and elementary teachers were assigned from one-half to two-and-one-half days per week per school according to need; (3) secondary school music students usually met 5 times weekly while elementary music students twice weekly; (4) beginning instruction was found at 4th grade level but was also found through high school, with like-instruments and like-families being taught in classes; (5) groups were generally granted permission to perform at any function for community service and educational experience; (6) centralized libraries and instrument storage were widespread.

237. Theno, E. Charles. "A Study of Orlando Di Lasso's Choral Works with Reference to School Performance." Unpublished Doctoral Dissertation, University of Oregon, 1954. 216 pp. (Ed.D.).

The purposes of the study were (1) to review and analyze the choral works of Orlando Di Lasso, (2) to ascertain which of these works are suitable for the average high school choral ensembles, (3) to show the style and characteristics of the music, (4) to select those compositions which could enhance the musical experience of young performers, and (5) to edit those compositions selected in notation suitable for high school students. The twenty-one volumes of the collected works of Di Lasso (Samtliche Werke) were obtained on micro-card from the Library of Congress. These 21 volumes were reported to be the only ones available in the United States. The criteria used for determining suitability for high school students were established and all 21 volumes were analyzed. The criteria used for editing the selected works were stated. Compositions included and edited in the study were the motet, madrigal, villanelle, chanson, and German lied. The following information was presented for each composition selected: title and date, mode, meter, type of choir, range and tessitura, accompaniment, language of text, style, mood, textual content, tempo, approximate performance time, and difficulty. (Faculty Advisor: Edmund A. Cykler).

238. Tietze, William B. "The Effect of Pre-band Melody and Rhythm Instruments on the Musical Learning of Beginning Fourth Grade Instrumental Students." Unpublished Doctoral Dissertation, The State University of Iowa, 1958. 108 pp. (Ph.D.). (Univ. Micro. No. 58-5868).

The purpose of the study was to determine the effect of pre-band melody and rhythm instruments on the musical learning of beginning fourth grade instrumental students. A group of 26 fourth grade students in one school were randomly assigned to either control or experimental instructional groups. Pre-tests consisted of an I.Q. test, the Iowa Basic Skills Test, and the Kwalwasser-Ruch Test of Musical Accomplishment. The control group received heterogeneous class instruction on band instruments (18 weeks) while the experimental group received preliminary rhythmic training with practice pads and drum sticks (4 weeks), flutophone instruction (3 weeks), and heterogeneous class instruction on band instruments (final 11 weeks). Final evaluation consisted of re-test with Kwalwasser-Ruch test and the investigator's "Practical Playing Test." The students' achievement on the latter test was evaluated by a panel of five judges who had had instrumental teaching experience at the elementary school level. The data were analyzed by means of t tests. Both groups made a statistically significant gain on the Kwalwasser-Ruch Test, but the experimental group did so to a greater extent. The experimental group was superior in the "Practical Playing Test" even though they had played on the band instruments seven weeks less than had the control group. (Faculty Advisor: Neal E. Glenn).

239. Tilson, Lowell M. "Music Talent Tests for Teacher-Training Purposes." Music Supervisors J., 18:3 (February, 1932), 26-27.

The purpose of the study was to determine whether the Seashore Measures of Musical Talent have sufficient predictive value to justify their use in state teachers colleges. Seashore tests and intelligence tests were administered to 240 entering music students and 142 majors at one college during a six year period. Standard scores on the Seashore tests were computed and a composite score was obtained for the 128 students for whom both Seashore test scores and grades for four terms in ear training and sight singing were available. Product moment correlations were computed. Music students were found to be superior to the students in the non-music courses of study with respect to the Seashore test scores (X=32 points higher) and intelligence test scores (X=7.84 higher). The correlation between Seashore test scores and term grades in ear training and sight singing was +.399 for the entire group, with the correlations being higher for the students scoring high on the Seashore test than for those scoring low. Correlations between intelligence tests scores and term grades in ear training and sight singing was +.3599, also higher for "talented" students. It was concluded that the test was useful in predicting failure in the music teacher training course of study.

240. Tilson, Lowell M. "Follow Up Study of Graduates from the Four Year Music Supervisors Course." School Music, 34 (May-June, 1934), 12-13.

A questionnaire was sent to 127 graduates of Indiana State Teachers College who had graduated in music education to discover their professional status. Of the 87 replying, 76 were still teaching. Only 19 (25 percent) were teaching only music while 31 were teaching music with one other subject, 16 were teaching music with two other subjects, and 4 were teaching music with three other subjects. The most common combinations included music, art, and English. The greatest number of respondents (63 or 89 percent) were teaching chorus and glee club, 55 directing orchestras, 54 teaching grade school, 44 teaching junior high school, 33 teaching instrumental music, 24 teaching music appreciation, 20 directing band, 11 teaching history of music, 11 teaching harmony, and 10 teaching voice classes. The respondents average music talent score, in terms of composite standard scores, was +1.0695, slightly lower than the average score found in a previous six year study.* The average percentile mark on the psychological test was 58.25, one point higher than the average for the six year period.* Those who were above the mean on either the musical talent tests or the psychological tests were close to the mean in salary. Those who were above the mean on both sets of tests were above the mean

in salary. Those who were no longer teaching had low composite scores (-12. to -2.) in the previous six year study.* Those still teaching had a range from -2. to +4. in the earlier six year study measures.*

*Tilson, Lowell M. "Music Tests for Teacher-Training Purposes." Music Supervisors J., 18:3 (February, 1932), 26-27.

241. Tippetts, Twain C. "Value Systems of Teachers in Creative Arts Compared with Those of Administrators and Teachers in Other Areas." Unpublished Doctoral Dissertation, University of California at Los Angeles, 1960. 132 pp. (Ed.D.).

The value systems of a large sample of educators was investigated for the purpose of revealing similarities and/or differences among separate subject matter area groups or administrators. The writer obtained the data from the University of California at Los Angeles School of Education. A random sample of 967 prospective and experienced educators admitted to credential or graduate programs at U.C.L.A. during 1952 and 1956 was selected. The Fisher t test and the analysis of variance were used to determine significant differences among scores on the Allport-Vernon-Lindzey Study of Values and the Minnesota Multiphasic Personality Inventory. Art, English, music, and theater arts subjects scored very similarly on values. Aesthetic values were dominant and economic values most recessive. Aesthetic value scores were practically identical for male and female music teachers. The male sub-samples of creative arts teachers demonstrated statistically higher scores than any of the other groups on the Mf Scale of the MMPI (.01 level). In terms of anthropological considerations, it was concluded that these higher Mf mean scores suggest that male teachers of art, English, music and theater subjects have a tendency toward values and interests which are considered as feminine in our culture. The value patterns of prospective and experienced teachers of the arts showed only minor differences. None of the other groups of teachers and prospective teachers rated the aesthetic value as dominant as did the art group. Only elementary teachers rated economic values as the most recessive. For school administrators and teachers of business and exact sciences aesthetic value was found to be most recessive. (Faculty Advisor: Malcolm S. MacLean).

242. Trzcinski, Louis C. "A Study of Extension String Programs." Unpublished Research Study No. 1, Colorado State College, 1962. 318 pp. (Ed.D.). (Univ. Micro. No. 63-1135).

An investigation was made of the following aspects of extension string programs sponsored by three universities: organization and administration of the programs, extension string activities related to in-service teacher training, and extension string activities related to community services. The investigator made personal visits to Boston University and the University of Illinois and made tape recordings of interviews with heads of extension string programs and music departments. Questionnaires were sent to music teachers who participated in the Boston University, University of Illinois, and Nebraska University string extension programs. The university representative indicated that the main purpose of the extension service in strings was to provide in-service training for teachers. The major differences between the three programs analyzed were in the areas of fees charged for the service and the emphasis on activities such as youth orchestras, community orchestras, and area string projects. (Faculty Advisor: E. E. Mohr).

243. Uldrick, Johnnye M. "An Investigation of Curriculum guides in Music in the Fifty States of the United States with Emphasis on the Guides for Senior High School Music." Unpublished Master's Thesis, Clemson College, 1961. 56 pp. (M.S.).

The purposes of the study were (1) to determine how many of the fifty states had curriculum guides in music in the public schools, and how many had a state supervisor of music or music consultant, (2) to determine under what department or division music instruction is administered, (3) to find what activities and courses in music should be

provided for the students in the senior high school grades, and (4) what experiences were being provided as revealed by the curriculum guides. Letters requesting curriculum guides and questionnaires were sent to all 50 states. Replies were received from all states. Results were compiled and findings were presented by the use of charts and graphs. Thirty states had curriculum guides in music or included music in their course of study (27 at the elementary level, 18 at the junior high level, and 19 at the high school level). School music was administered in 68 percent of the states by a division of a department of instruction or a division of elementary or secondary education. Eight percent of the states frequently recommended the following music for the senior high school: boys' glee club, girls' glee club, chorus, orchestra, and band. The second most frequently recommended experiences were: small vocal ensembles, class instrumental instruction, general music, music theory, and music appreciation. The activities recommended least often were dance band, music history, and class instruction in piano. Twenty of the states had a supervisor or consultant in music. (Faculty Advisor: H. H. McGarity).

244. Utgaard, Merton B. "Analysis of Teaching Content Found in Ensemble Music Written for Brass Wind Instruments." Unpublished Field Study No. 1, Colorado State College of Education, 1949. 213 pp. (Ed.D.). (C.S.C.E. Micro).

An analysis was made of the teaching content in ensemble music written for French Horn quartet, trombone trio and quartet, brass sextet, and brass choir. Forty-three authorities cooperated in establishing evaluative criteria for the music. Authorities were composers, arrangers, professional performers, public and private music teachers, and college music educators. Criteria which would determine what teaching concepts and content analysis were considered significant in analyzing the music were established. The obtained criteria were placed in a check list of teaching concepts and content analyses and the checklist was sent to the authorities. Mean ratings on each item were calculated and an arbitrary cut-off point was established. Reliability of the experts' rankings was obtained by the split-half method using the Spearman-Brown prophecy formula. The music analyzed consisted of compositions found in M.E.N.C. listings (Instrumental Ensemble Committee), the Interlochen National Music Camp, and 13 research studies. The ensemble music was analyzed and each composition was notated. Findings were reported in frequencies and percentages. The only instrumental grouping in which full scores were provided for all music examined was the brass sextet. Sixty-five to 91 percent of all other ensembles were published with full scores. Contrapuntal writing was not well represented in the easier grades of music but overall, structural styles were fairly evenly distributed throughout all the music examined, except that a strict basic chordal style was not found in the most difficult grades of music. The percentage of contrapuntal writing increased as the level of difficulty increased. (Faculty Advisor: Estell E. Mohr).

245. Van Sickle, Howard M. "An Exploratory and Descriptive Study of the Interpersonal Factors and Group Dynamics of Instrumental Music Groups." Unpublished Doctoral Dissertation, Chicago Musical College, Roosevelt University, 1955. 347 pp. (M.Ed.D.).

The project was an investigation of the awareness players and directors have of the group dynamics which operate in the rehearsal activities of the instrumental music group. The data were gathered in a field study of 15 public school instrumental music groups and from three community music groups which were fairly evenly divided between orchestra and bands. Stereophonic, magnetic tape recordings of rehearsals were made during the eighth and ninth months of the school year. Fifty-four selected individuals submitted to a paper and pencil test and to a tape recorded group interview. Directors of the organizations were interviewed at least twice. The data were organized under four categories: (a) the internal dynamics of the rehearsal group, (b) the effect of the group as an environment for the individual, (c) the effect of the individual on the rehearsal, and (d) the effect of the external environment on the rehearsal group. The public school music group in rehearsal is affected by dynamic forces similar to those operating in other kinds of groups. Players and directors of public school music groups are not equally aware of group dynamic forces. The goals of the players in school instrumental

music groups will tend to have different directions from those of the directors. Known significant concepts of groups are being used by directors, but are not recognized and utilized in some cases to the fullest possible extent. To a large extent, directors of public school instrument music groups were not aware of the group forces and are not using them.

246. Von Ende, Richard C. "The Administration of Music Education in the Public Schools of Large Cities." Unpublished Doctoral Dissertation, University of Pittsburgh, 1941. 240 pp. (Ph.D.).

A survey was made of current practices (1940) and policies in the administration of music education in 11 large cities. Administrative functions were obtained from printed sources and were combined into a preliminary survey instrument. A questionnaire and checklist was developed and refined with the help of a panel of experts. Eleven responses were obtained from the 20 arbitrarily selected cities. The data were analyzed in frequencies and percentages. Many different terms were used in designating the chief music official. The instruction staff member ratio was 1,271 to 1. The majority of the persons acting as jurors in the validation of the principles developed in this study recommended the use of the unit type of administration and supervision of the music department. Eight of the 11 cities studied had a single head officer in charge of music education. Considerable emphasis was being given to the results of standard objective tests when selecting new music teachers. There was a lack of uniformity in credit-granting within the sample. Four of the cities were affected in their choice of music materials by the limitations of state-wide adoptions. The jurors agreed that the director of the music department should be responsible for the maintenance of quality standards of the materials of instruction used by the music personnel. Only two of the cities knew how much their music education program actually cost. About half of the cities reported problems with the musicians' union. (Faculty Advisor: Lee M. Thurston).

247. Ward, Ted W. "The Experimental Testing of a Concept of Perception with Implications for Music Education." Unpublished Doctoral Dissertation, The University of Florida, 1956. 156 pp. (Ed.D.). (Micro. No. 56-3350).

The purpose of the study was to produce certain experimental demonstrations of aural perception among high school music students. A concept of environmentally functional perception was stated in detail and five phases of a "functional concept of perception" were arrived at. Each of the five phases was tested experimentally to determine its relative importance to the initial concept. Criteria were established and all of the experiments were subjected to the criteria before they were included in the design of the study. One hundred high school music students from one summer music camp were chosen as subjects. Three of the experiments were administered individually in a room especially equipped with electronic apparatus. Two tests were administered to the subjects as a group. The data were analyzed in frequencies, percentages, and distribution graphs. The functional concept of perception was demonstrated. That individual differences in aural perception can result from a common stimulus in the environment was demonstrated. The attaching of meaning to a sound was identified as a subjective phenomenon, based partly upon conscious factors of association from the hearer's experience and partly upon subconscious factors which were not identified by the hearer. Structured common experiences may not result in common aural perceptions. Intellectual activities can be a hindrance to aural perception. (Faculty Advisor: Clara M. Olson).

248. Warren, John R. "Music Elections by Academically Talented Students in Florida High Schools." Unpublished Doctoral Dissertation, The Florida State University, 1961. 238 pp. (Ph.D.). (Univ. Micro. No. 61-5662).

Of the Florida white public school students who had graduated in 1959 and who ranked in the top 15 percent on state twelfth grade tests, almost half had elected at least one year of high school music; however, less than 17.2 percent of this academically talented population remained in high school music classes for as many as three years.

Four surveys were conducted to determine the primary reasons these students discontinued in music. A total of 1,108 students who were well-distributed geographically became the sample. Questionnaires were constructed, pre-tested, and refined before being sent to (1) the student sample, (2) directors of guidance in each of the 122 high schools represented, (3) 206 music teachers in the 122 schools (4) and state music supervisors as well as the general literature. Replies were received from 102 guidance directors, 182 music teachers, and 48 state supervisors. The following factors were found to be the primary reasons academically talented students had discontinued formal music studies while in high schools: (1) the demands of college preparatory courses and the content of standardized achievement tests used to determine college elegibility or entrance; (2) lack of diversity of instruction within many high school music courses; (3) out-of-school hour conflicts between music and other activities, and (4) the personality and classroom techniques of the high school music teacher. (Faculty Advisor: W. L. Housewright).

249. Wassum, Sylvesta M. "An Appraisal of Some Philosophic Implications of Elementary School Music: A Study of Selected Schools in Los Angeles County, California." Unpublished Doctoral Dissertation, Northwestern University, 1957. 180 pp. (Ph.D.). (Univ. Micro. No. 58-365).

An analysis and evaluation was made of music in self-contained classrooms to discover the philosophic basis for such practices, their consistency with the discovered philosophy, and the most influential executants of philosophy among teachers, administrators or communities. The philosophic system selected was pragmatism, based on the ideas of Dewey, especially the concept of (1) reality as being the process of inquiry itself, (2) value as being contextual, i.e., temporal, relative and dynamic, and (3) knowledge as being a function of a problematic situation. Applied to music in the schools, the factors for analysis become the amount of time for music in the school week, breadth of activities, environmental facilities, the treatment of individual differences, and education of cognitive powers. The data was obtained from questionnaires, observations and interviews and was tabulated for each factor. School districts were ranked on the basis of percentages and correlated by the use of the rank difference method. The differences in correlations indicated the relative weight of influence of teachers, administrators, or communities. Pragmatic philosophy in practice was found in all classrooms but with wide variations in extent and consistency. The most important influence in the development of pragmatic educational principles in practice was the classroom teacher. The administrators' most important contribution was the provision of equipment. Communities were seen to have little influence upon school practices, an inconsistency with the tenets of pragmatism. (Faculty Advisor: Clifton S. Burmeister).

250. Watkins, John G. Objective Measurement of Instrumental Performance. ("Teacher's College Contributions to Education, No. 860.") New York: Columbia University, Bureau of Publications, 1942. 106 pp. (Ph.D.).

A test was constructed which would objectively and reliably measure the sight reading ability of cornet players. A thorough listing of cornet methods and class methods was obtained from publishers, public school teachers, and private teachers. Twenty of the most widely known class cornet methods and three similar private methods were selected to determine the average week in which each symbol of musical notation was first introduced to the student. Four equivalent forms of the test were constructed and examined for face validity by judges. A method of scoring was developed using each measure of the music as a scoring unit. The four preliminary tests were administered to 105 junior high and high school cornet students. Two final tests evolved which meet certain criteria of difficulty and which had high rank-order validity coefficients as well as high equivalence and reliability coefficients. High internal consistency was achieved. Forms A and B of the test were administered to 623 cornet players from public schools, as the final validation procedure. The test was found to differentiate achievement reliably and validly in two areas of cornet performance. Approximations of growth curves showing the development of sight reading ability and technical skill were developed (Faculty Advisor: James L. Mursell).

251. Watkins, Robert H. "The Construction and Testing of a Forced Choice Scale for the Evaluation of Student-Teachers in Vocal Music at the Junior High School Level." Unpublished Doctoral Dissertation, University of Illinois, 1958. 105 pp. (Ed.D.). (Univ. Micro. No. 58-1747).

A forced choice rating scale was developed to be used by junior high school pupils in the evaluation of student teachers working in vocal music at the junior high school level. Each of 214 seventh and eighth grade students produced descriptive sketches of favorable and unfavorable traits of music teachers. A list of 229 teacher traits was developed from the sketches and submitted to a jury of experts for judgment as to content validity. Item discrimination was determined by administering the list to 100 pupils who were asked to rate both the best and worst music teacher they had ever had. The final, 40-item instrument was submitted to 1,224 pupils in order that they might rate 42 student teachers. Other ratings of the student teachers were made by cooperating teachers (Beecher Record),and by themselves (MTAI). The forced choice scale's internal consistency computation yielded a coefficient of .533. The Pearson Product Moment correlation was performed upon the scores from the three measures of student teaching effectiveness. It was concluded that statements referring to student teachers in music can be matched successfully into forced choice blocks. The resulting forced choice scale discriminated significantly among student teachers and showed satisfactory resistance to bias. The Beecher Record, rating observable items of teacher efficiency, the MTAI, measuring music teacher attitudes, and the scale constructed in this study appeared to have no statistically significant relationship in the way they rate student teachers of junior high school vocal music. (Faculty Advisor: Charles Leonhard).

252. Wayne, Morton. "A Study of Student Participation in Music in the Public Secondary Schools of Massachusetts." Unpublished Project Report, Teachers College, Columbia University, 1961. 463 pp. (Ed.D.).

A survey was made of music education practices in the public schools of Massachusetts. The data for this study were obtained from the 1957 Massachusetts Biennial Secondary School Survey. A supplementary factual questionnaire devised by the investigator was included in the mailing from the state education department. All schools in Massachusetts responded. The data were analyzed in frequencies and percentages. Each area of the music curriculum was examined according to grade level, school size, school plant, and time allowance. The general plan of this project report, and the tables presented, make available information pertaining to musical activity, grade level, school size, school plant, instructional time, and enrollment. One hundred four students per thousand received instrumental lessons at the seventh grade level. This number was decreased to less than half on the senior high school level. A similar pattern was detected in the other music areas. Orchestra was apparently the weakest area in terms of enrollment. (Faculty Advisor: Norval L. Church).

253. Webber, Emily E. "Minimum Piano Requirements for Music Education Majors: A Comparative Study and Evaluation of Piano Competencies." Unpublished Doctoral Dissertation, The Florida State University, 1958. 188 pp. (Ph.D.). (Univ. Micro. No. 58 2798).

A survey was made for a comparative study and evaluation of current thought, research, and practice concerning minimum piano requirements for music education majors. Questionnaires were constructed and sent to the 395 institutions which were located and thought to have a music education curriculum. The data were analyzed in frequencies and percentages. Forty-six percent of the institutions dealt with the problem of piano credit for music education majors by requiring the same amount of credit for all music education majors regardless of the area of performance specialization. Eighty-six percent of the institutions stated a part of their minimum piano requirements for music education majors in terms of levels of advancement. Only three functional abilities were required by at least fifty percent of the institutions for all music education majors. Functional abilities most frequently required were the sight reading of hymns, community songs, and vocal accompaniments, and the harmonizing melodies. A majority of the institutions did

not have entrance requirements in piano for music education majors. Approximately one-half of the institutions offered class piano instruction for music education majors. Most of the institutions did not employ special piano teachers or offer special piano courses designed just for music education majors. Most of the questionnaire respondents supported the basic concept of functional minimum piano requirements for music education majors, but about one-third indicated that their institutions lacked success in implementing and/or enforcing such requirements. (Faculty Advisor: Karl O. Kuersteiner).

254. Weegar, Carlton E. "Music Teacher Certification in New York State." Unpublished Doctoral Dissertation, New York University, 1957. 397 pp. (Ed.D.). (Univ. Micro. No. 22-737).

The purposes of the study were to trace the history of music teacher certification in New York State from 1896 to 1956, to trace subsequent changes in the practices of music teacher certification, and to evaluate the present system and standards of music teacher certification. The history of music education in New York State was outlined with reference to primary sources for the most part. The writer relied heavily upon The Euterpeiad, a magazine published in the early portion of the 19th century. As the study progressed chronologically into the 20th century, practices found in the State of New York were compared to practices of five selected states that were comparable to New York in population and wealth. A questionnaire was devised and pre-tested and sent to a stratified sampling of 200 music teachers in New York State, and to 187 school administrators. Shortcomings inherent in the certification program were found to include (1) a lack of definition of course content, (2) no successful way of administering competency requirements, and (3) the absence of a plan to help certification requirements keep pace with educational developments. In student teaching, the semester hours of credit in each school were based on widely varied concepts as to the amount of time required in actual teaching or observation per semester hour of credit. (Faculty Advisor: John C. Payne).

255. Weidensee, Victor J. "A Study to Adapt the Instrumental Music of the Mannheim School as Suitable High School Woodwind Ensemble Music." Unpublished Doctoral Dissertation, University of Oregon, 1956. 143 pp. (Ed.D.). (Oregon Univ. Micro. No. 20-702E).

Instrumental literature was selected from the compositions of the Mannheim School, i.e., those works which could be adopted as suitable woodwind ensemble music for use in the modern high school. Fifty microfilmed works of Mannheim composers were obtained. An attempt was made to establish criteria, criteria eventually being established arbitrarily. A history and biography of the Mannheim composers represented was presented and musical terms were defined and illustrated. Compositions which satisfied the criteria were then analyzed. Ranges, technical problems, degree of difficulty, and type of transcription were stated. About 95 percent of the currently available compositions by the Mannheim composers are not suitable as woodwind ensemble music because of one or a combination of the following: length of performance time, range, and technical demands, particularly in rapid-tempo movement. (Faculty Advisor: Robert E. Nye).

256. Weigand, James J. "A Comparison of the Effectiveness of Two Methods of Teaching General Music in the Junior High School." Emporia State Res. Stud., 10:3 (March, 1962), 5-55.

An experiment was conducted to test the hypothesis that somewhat ineffective teaching in junior high school general music classes often is caused by poor organization and presentation of materials, and may be improved by the judicious organization of activities and materials into broad units of instruction for student experiences during the one-semester general music class in seventh grade. A random sample of six Kansas junior high schools was made, stratified into three school-size categories. The three experimental classes were given instruction based on resource units developed by the researcher while the three teachers of the three control classes were given brochures outlining the background subject matter to be studied and suggestions for the sources of the materials.

No information was given to the control group teachers in regard to organization or teaching of the material, F tests for homogeneity of variance were applied to all pre-tests for both groups (I.Q., Gaston Test of Musicality, Farnum Music Notation Test). Also, an achievement test was constructed and its reliability established. Both experimental and control groups showed improvement in the ability to read music during the course of study as determined by the Farnum test. On the Gaston test, three schools raised the mean score. Achievement test scores were improved within both groups. Two of the three experimental groups scored significantly higher on the achievement post-test. It was concluded that the "resource unit of instruction produces a higher degree of effective teaching and learning."

257. Wenaas, Sigurd B. "A Study of the Relationship Between Musical Ability and Various Intelligence, Scholastic, and Personality Factors." Unpublished Master's Thesis, University of Idaho, 1940. 39 pp. (M.S.).

A group of 1,238 students in grades 6 through 12 in one school system were chosen as subjects in a study of relationships between musical ability, intelligence, and selected personality factors in school children. A test battery was administered which included the K-D Musical Ability test, Otis Group Intelligence Test, Kuhlmann-Anderson Psychology Test, University of Minnesota Unit Scales of Attainment Case Inventory (high school students only), and academic grades. Correlations were obtained between the K-D Test and the other measures. (A correlation was studied also between a select music student group and the total population studied). Correlations between K-D scores and I.Q. were higher in the lower grades and decreased with each advance in grade. The correlations between grades in school and music ability test scores did not exhibit the same progressive tendency noted in the I.Q. factor but all correlations were positive. There was no significant correlation between K-D scores and personality factors. Although a positive correlation existed between musical ability as measured by the K-D test, intelligence, scholarship, and certain personality factors, the correlations were not high enough to be of significantly true predictive value in determining success in musical accomplishment.

258. Wheeler, Lester R. and Viola D. Wheeler. "The Musical Ability of Mountain Children as Measured by the Seashore Tests of Musical Talent." Pedagogical Seminary and J. Genet. Psychol., 43 (December, 1933), 352-76.

A comparison was made between the musical talent of mountain children as measured by the Seashore Tests with the results of ten different investigations which used the same test. In 1932 the Seashore Test of Musical Talent was given to 456 mountain children of East Tennessee in grades five through eight, inclusive. The criteria for determining the term "mountain children" was not given. Test results were then compared with ten other studies which used the Seashore Test on various social and racial groups. The mountain children scored slightly below the Seashore norms in practically all the measures and significantly below in pitch and tonal memory. When the mountain children were compared with R. Larson's study of eighth grade beginning music class a difference in favor of the mountain children was found. Mountain children appeared superior to children of San Jose, California in most of the measures of the Seashore Test. Mountain children seemed to be above W. S. Larson's group of beginning instrumental classes in public school music and above his junior high school orchestra group. Mountain children were higher on scores than the white and Negro children as reported by Gray and Bingham. The Negro children as reported by Johnson seemed to be superior to the mountain children in practically all measures of the test. There was a significant difference in favor of the mountain children when compared with full blood Indian children measured by Garth.

259. Whitener, Agnes B. "A Study of the Prevailing Practices of the General Music Course in the North Carolina Secondary Schools." Unpublished Master's Thesis, Appalachian State Teachers College, 1954. 169 pp. (M.A.).

A survey was made of prevailing practices in secondary school general music classes of North Carolina in regard to organization, method of instruction, activities, student response to activities, and the use of teaching aids. A questionnaire was prepared and sent to teachers of general music in all schools (grades 7-12) in North Carolina. Returns were received from 34 of the total population of 35 schools. General music was required, rather than elective, in more than 60 percent of the schools surveyed, and was most frequently offered in grades seven and eight. In a majority of schools the classes met twice weekly for 30 minutes per meeting. In a majority of schools singing activities received much emphasis, while listening, study of instruments, study of theory, musical games, and folk dancing received some emphasis. No emphasis was given to creative activities in the majority of schools. (Faculty Advisor: Gordon A. Nash).

260. Wiebe, Gerhart D. "The Effect of Radio Plugging on Students' Opinions of Popular Songs." J. Appl. Psychol., 24 (December, 1940), 721-27.

The investigator's purpose was to determine whether or not extensive broadcasting (called plugging) of a song would influence students' opinions about a song. An arbitrary sample of 134 high school and college students was selected and divided into four groups. Each group listened to six new popular songs (making a total of 24 songs) played by a "good consistent commercial pianist." Each song was heard twice. The groups were asked to rate the songs on a ten point rating scale, and also were asked to answer seven questions concerning the song. All groups were reconvened four and eight weeks later for the second and third sittings. "Plugging" was determined from data in a weekly report published Variety Magazine. The chi-square technique was used to calculate the consistency of "plugging", while Fisher's t test was run to determine the level of significant difference between sittings one, two, and three, and overall differences. The students liked the ten popular songs that were "plugged" no better than the thirteen songs which were seldom or never broadcast. After a month, the "plugged" songs were liked as well as before, while the "unplugged" songs were rated somewhat lower. After a second month there was no change in the ratings of plugged or unplugged songs. Plugging did not affect the ratings of the initially "more liked songs." Plugging did affect the rating of songs originally less well-liked. These songs, if plugged, increased slightly at each sitting. There was no observable difference in the effectiveness of plugging for radio-enthusiasts as against casual listeners.

261. Wikstrom, Thomas N. "The Application of Early String Literature to Heterogeneous String Classes at the College Level." Unpublished Doctoral Dissertation, The Florida State University, 1960. 183 pp. (Ed.D.). (Univ. Micro. No. 60-5509).

The purpose of this study was to select early string literature within the technical limitations of the heterogeneous string class for music education majors at the college level. Criteria for difficulty were obtained from analyses of commonly used string methods books. Literature was selected from historical editions. Necessary editing was explained for each example. Forty musical examples were selected and included in the dissertation. Composers represented included: Staden, Fox, Vivaldi, dall'Abaco, Scheidt. Gassmann, Corelli, W. Mozart, J. Stamitz, G. Benda, Muffat, J. C. Bach, Handel, Deller, Dittersdorf, Giardini, Fischer, Forster, Pergolesi, Pachelbel, Blow, Gluck, Sammartini, Pisendel, Toeschi, Eichner, Traetta, and L. Mozart. (Faculty Advisor: Irving Cooper).

262. Wiley, Charles A. "An Experimental Study of Tachistoscopic Techniques in Teaching Rhythmic Sight-Reading in Music." Unpublished Doctoral Dissertation, University of Colorado, 1962. 265 pp. (Ed.D.). (Univ. Micro. No. 63-2029).

The investigator sought to determine the effect that tachistoscopic drill would have on the development of rhythmic sight-reading at the fifth grade level. Two fifth grade classes from the Beaumont, Texas Public Schools were chosen to be the experimental and the control groups. The method of teaching in use at the time of the study was retained

and the investigator taught both groups. A tachistoscopic device was procurred, slides were made for the experiment, and a jury rated these tachistoscopic slides by order of difficulty. The control and the experimental groups were given the same instruction except that the tachistoscope was added to the experimental group procedure. The subjects were tested prior to and at the end of the experimental period. The experimental and the control groups were then reversed for an additional ten-lesson period. Reliability of the method of evaluation was determined by correlation. Rather arbitrary criteria were established for all test and construction procedures. The data from the cumulative records of the subjects regarding mental ability were obtained. The primary data analysis technique employed was the t test. Tachistoscopic techniques were not more effective than conventional techniques in teaching rhythmic sight-reading to those (1) either above or below the mean in rhythm recognition as measured by the rhythm recognition test developed for this study, (2) either above or below the class average in I.Q., or (3) either with or without instrumental lesson experience. Tachistoscopic techniques were not significantly more effective than conventional techniques as used in this study in the developing of rhythmic sight-reading ability at the fifth grade level. (Faculty Advisor: Hubert H. Mills).

263. Willeke, Russel E. "A Survey of the Junior High School General Music Course in the Rural Schools of District Three in Northwestern Ohio." Unpublished Master's Thesis, Bowling Green State University, 1955. 67 pp. (M.S.).

A survey was made of the general music course in the junior high schools of the exempted village school districts and county school districts of District III (of the Ohio Music Education Association) in Northwestern Ohio. A questionnaire was constructed and mailed to all 77 junior high schools in the district. Forty-seven completed questionnaires were returned. The data were presented in percentages and analyzed. The most prevalent type of junior high school general music classes was that consisting of both boys and girls, grouped according to grade level. Most of the schools were meeting the requirements of the Ohio High School Standards for junior high school music in terms of time spent by the students in the general music class. It was found that pupils of the general music courses generally were given the opportunity to demonstrate their musical talent publicly. Also, music teachers generally make use of audio-visual instruction in teaching music appreciation. A high percentage of students taking general music, continued by entering the performance groups at the senior high school level. (Faculty Advisor: Ralph L. Beck).

264. Williams, Harold M. "A Study in the Prediction of Motor Rhythmic Performance of School Children." Pedagogical Seminary and J. Genet. Psychol., 43 (1933), 377-388.

Siever's Modification of R. H. Seashore's apparatus for measuring motor rhythm, adapted so that over 30 common rhythm patterns were available, was used in this quest for an instrument capable of predicting future performance of children in the area of musical ability. One hundred school children ranging in age from 6 to 12 years were given the motor rhythm test using five rhythmic patterns given in double fatigue order with 10 consecutive repetitions counted for each pattern. Predictive reliability was established for the complete test at .911 over the age range of 6 to 12 years. A re-test was performed after a 15 month interval. On the re-test, the double fatigue order was omitted and only the series in ascending order of difficulty was used. Scores were analyzed by standard deviations between age ranges on both the test and re-test situation. Reliability correlations were calculated to determine the predictive power at the 15 month interval. The reliability or predictive power of this test when repeated after a 15 month interval using as subjects children ranging in age from 6 to 12 years, was .74 as compared with a reliability of .85 at a single setting. Coefficients for identical series were higher than those for dissimilar series. Elimination of the influence of heterogeneity in age reduced the correlations only slightly in the identical series but there is a suggestion that the effect of age heterogeneity is greater in the dissimilar series.

265. Williams, Raymond E. "The Measurement and Prediction of Cooperating Teacher Effectiveness in Music Teacher Education." Unpublished Doctoral Dissertation, University of Illinois, 1958. 163 pp. (Ed.D.). (Univ. Micro. No. 58-5520).

The three purposes of the study were (1) to determine the relationship of cooperating music teacher effectiveness measurement to four selected factors; (2) to select a combination of measured factors which is significantly correlated with an effectiveness criterion; and (3) to derive appropriate multiple regression equations for the prediction of cooperating teacher effectiveness. A "Student Teaching Inventory" was developed and evaluated for determining cooperating teacher effectiveness or appraisal by former student teachers, correlations being based on 235 cases (r = .94). The IPAT Music Preference Test of Personality, The Aliferis Music Achievement Test, the Minnesota Teacher Attitude Inventory, and the Strong Vocational Interest Blank were administered to a sample of 32 cooperating teachers, and inter-correlation matrices were developed to indicate the relationship of the various measurements. College supervision ratings were compared with inventory scores of the cooperating teacher. Supervisor's ratings were predictable with accuracy equal or slightly superior to that of inventory predictions within the sample tested. Inter-correlation matrices were developed to indicate the relationship of the various measurements. Average deviations of individual inventory scores were correlated with mean inventory scores. Scores for personality factors four, five, and eight of the IPAT Test and the vocational interest test proved to be the best data for predicting cooperating teacher effectiveness as perceived by student teachers. Scores for personality factors eight and ten (IPAT), harmonic sub-test scores, and attitude scores were the most effective predictors of supervisor's ratings. (Faculty Advisor: Charles Leonhard).

266. Willmann, Rudolph R. "An Experimental Investigation of the Creative Process in Music." Psychol. Monographs, 57:1 (1944), 1-76. (Whole Number 261).

An experiment was conducted to determine whether or not (1) a visual design stimulus will suggest to different composers musical themes with similar characteristics, (2) whether or not the characteristic qualities of these themes are sufficiently individual that they can be associated with the respective stimulating designs, and (3) whether or not these designs will suggest to high school music students themes with characteristics similar to those present in themes created by the composers. Following a review of synesthesia and the psychology of the creative process, four abstract diagrams of differing character were drawn and sent to professional composers (mostly in the style of popular or dance music). Each composer was requested to compose a phrase immediately after studying the designs individually. The compositions received were analyzed by a group of trained auditors, by a composition teacher, and, for purposes of comparison, a group of untrained auditors. Twenty high school students, all of whom had had at least eight years of public school music instruction, were asked to improvise (by humming) a composition after observing the same designs. The writer recorded each student's responses and immediately checked with the student for accuracy of notation. There was a carry-over from an abstract design to the resultant musical theme when the theme was composed to the design. This provided an indication that the creative product was influenced by an abstract design or possibly some other visual object when the design or object was used as a stimulus by the creative worker.

267. Wilson, William C. "Some Inter-relationships of Verbal and Musical Listening Abilities in Elementary School Children." Unpublished Doctoral Dissertation, University of California at Berkeley, 1960. 90 pp. (Ed.D.). (Univ. Calif. Micro. No. CU-4713).

An analysis and evaluation of tests designed for measuring listening ability in music and language was made. Seven school systems in California were arbitrarily selected and a battery of tests was given to all sixth-grade students within the 7 schools. The test battery consisted of the Whistler-Thorpe Musical Aptitude, Sequential Tests of Educational Progress Language Listening Test, A Test of Musicality (Gaston), and Kyme Test of Aesthetic Judgment. The investigator administered each test to a total of 450

subjects. Inter-correlations and factor analysis were applied to the sorted data. The final number of subjects was 369 sixth grade pupils. Correlations between language listening and music listening scores were relatively close, ranging from +.31 to +.40. In a small group of three classes, administrations of the STEP Listening Test without reading the listening paragraphs result in better-than-chance scores for all individuals taking the test. This suggests that the test measured a combination of intelligence, acquired environmental factors, and listening ability rather than listening ability in isolation. There were no significant differences between scores achieved by boys and scores achieved by girls on the STEP Listening Test. There were significant differences between scores achieved by boys and scores achieved by girls on all of the Gaston Tests and on the Whistler-Thorpe Rhythm Test. A considerable portion of the Whistler-Thorpe and the Gaston Tests are taken up by language listening material. Because this material is similar to materials included in language listening tests, it may be operating as an adulterant of validity. (Faculty Advisor: Harold D. Carter).

268. Woerner, Gerald H. "An Analysis of Certain Criteria of Musicianship as Recommended by the Teacher Training Curriculum Committee of the Music Educators National Conference, on the Basis of the Training and Experience of Pennsylvania School Music Teachers." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1949. 498 pp. (Ed.D.).

The purposes of the study were (1) to analyze the skills of musicianship needed by music teachers (based on the M.E.N.C. Teacher Training Curriculum Committee progress report of 1944), and (2) to compare these recommended skills with the training and experiences of Pennsylvania school music teachers and with the curricula of their alma maters. An analysis was made of the catalogues of the 17 Pennsylvania institutions certified to grant music education degrees. Questionnaires were sent to the heads of all 17 music departments (100 percent return) to ascertain diversity of courses for each criteria, the degree of training in each skill, and the relationship of the various offerings to each skill. A second questionnaire, designed to determine judgments with regard to the need and use of the skills, was checked for reliability and administered to 220 Pennsylvania school music teachers. The data analysis techniques included mean ratings, standard error of measurement, and percentages. The average number of semester hours in the various areas of study were above the M.E.N.C. recommendations, except for applied music and electives. Most skills were judged "very" or "exceptionally desirable", even though considered not needed or useful in teaching. Exceptions were "Extensive Music Performance Criterion (9c)" and two of the "Music Theory Criteria." Forty-seven criteria were judged reliably greater in desirability than in need and usefulness. The institutions judged the vast majority of the various skills to be reliably greater in all phases investigated than did the graduates. (Faculty Advisor: Hummel Fishburn).

269. Wolfe, Irving W. "An Analysis of the State Teachers College Education of Music Teachers and Supervisors." Unpublished Doctoral Dissertation, Northwestern University, 1936. 312 pp. (Ph.D.).

The study was an analysis of existing four-year music education curricula in selected state teachers colleges in order to indicate areas in need of improvement and changes in practice leading to the effective preparation of music teachers. The data were gathered by means of a questionnaire and personal interviews. The subjects were 663 teaching alumni from 52 state teachers colleges, music superintendents and supervisors, and faculty of small colleges. It was found that prospective teachers were selected primarily on their performance in applied music and participation in music organizations. No general practice was found. Curricular balance between general and specialized education, including student teaching, varied with the latter ranging from 31 percent to 71 percent and with a median of 41 percent. Among alumni respondents, 30 percent taught music only and 50 percent had taught both instrumental and vocal music. Of the institutions requiring no applied music, no orchestral instruments, no conducting, a small number of hours in music requirements, and fewer contact hours with less varied experience in student teaching, the large majority were small colleges with less than 25 majors and 2 to 4

instructors. The author recommended that teacher education should be concentrated in a few institutions with sufficient staff, facilities and students to make possible a program of quality.

270. Wolner, Manuel, and W. H. Pyle. "An Experiment in Individual Training of Pitch-Deficient Children." J. Educ. Psychol., 26:8 (November, 1933), 602-08.

An investigation was made as to whether children rated very poor in vocal pitch reproduction by their teachers could improve through individual training. Music teachers in three elementary schools of Detroit were asked to identify students who exhibited poor pitch reproduction vocally. Of the students listed, the seven judged poorest were chosen as subjects. No student selected could distinguish a difference of 30 vibrations as produced by whipple forks. All students had received instruction of from five to seven years in the Detroit Public Schools. The pupils were taught by rule to reproduce tones given from a piano and from whipple forks. The training period was three months. The subjects learned (with great variation in time required for learning) to discriminate perfectly the intervals of octaves, fifths, thirds, whole tone and semi-tones in the range from A, through a'''''.

271. York, Roy, Jr. "An Experimental Study of Vocal Music Reading of Public High School Music Students Using Eye-Movement Photography and Voice Recording." Unpublished Doctoral Dissertation, Syracuse University, 1952. 439 pp. (Ed.D.).

A study was made identifying characteristic eye-movement patterns of inferior and superior sight readers. Subjects were chosen from public school bands, orchestras, and vocal groups. Kwalwasser-Dykema and Kwalwasser-Ruch tests were administered to 606 students from which 60 high and 60 low-scorers were chosen for eye-movement photographs while sight reading. The variables investigated were vocal or instrumental background, amount of theoretical music training, performance on K-D and K-R tests, and amount of private instruction. The findings concerning "superior" readers were as follows: (1) a larger proportion of instrumentalists and smaller proportion of singers, (2) little difference in boy-girl ratio, (3) more advanced in school grades, (4) higher K-D and K-R rank, (5) less variability, (6) about 40 percent more hours of public school music class training, (7) smaller proportion of total training time spent in class instruction -- more than five times as many hours of private instruction, (8) a more rapid rate of reading, (9) wider eye-voice leads that are shorter in duration when reading more difficult material, (10) shorter fixational duration, (11) larger perceptual span, (12) fewer fixations (including regressions), yet more fixations (including regressions) in a timed study period (28 seconds). Superior post-study performances as compared with sight reading of both simple and more difficult material result in: (1) a more rapid rate of reading, (2) high relationships higher between slower rates of reading and fixations of longer duration, (3) no appreciable difference in width of eye-voice lead in percentage of line, (4) no appreciable difference in fixational duration, (5) larger perceptual spans, and (6) fewer fixations (including regressions). (Faculty Advisor: Jacob Kwalwasser).

272. Zack, Melvin L. "A Study of the Influence of Selected Socio-Cultural Characteristics on Participation in Instrumental Music," Unpublished Doctoral Dissertation, University of Kansas, 1953. 248 pp. (Ph.D.).

A survey was made to determine whether or not the public schools of Kansas were providing to all children equal opportunities for participation in instrumental music classes. Seven of Kansas' most heterogeneous communities were selected for the study. Heterogeneity was determined by averaging six ratios of the number of persons in subculture groups to the number in the total culture. Samples of 538 eighth grade students and 422 twelfth grade students were selected in the seven cities. A home support for music questionnaire was constructed and validated. The questionnaire, I.Q. test, and the Gaston Test of Musicality were administered. Socio-economic status was determined

by using the Warner "Index of Status Characteristics." F-tests, t-tests, d-tests, and ANOV by ranks were employed. In 12 of the 15 sample schools, participants in instrumental music were significantly superior to non-participants with respect to intelligence, musicality, interest for music, and home support for music when the latter four were expressed as a single composite. In these 12 schools no significant association was found between participation and each of the following characteristics: socio-economic status, religion, family size, and nationality background. Comparison made between the 24 Negro students and a white group equated for abilities, interests, socio-economic status, and grade level showed no significant association between race and participation. Participants in all schools were significantly superior to drop-outs with regard to composite scores representing the four ability and interest measures. With composite scores held constant, there was found no significant association between drop-outs and each of the following characteristics: socio-economic status, family size, nationality background, and religion. (Faculty Advisor: James F. Nickerson).

273. Zima, Barbara H. "A Comparative Study of Two Approaches to the Teaching of Required Music Classes in the Junior High School." Unpublished Master's Thesis, Northwestern University, 1956. 57 pp. (M.M.).

Two different approaches to the teaching of required music classes in one junior high school were compared. Three classes, one from each grade level six through eight, were arbitrarily chosen as a control group and six classes from the same three grades were chosen as an experimental group. The groups were not equated and all subjects were from one junior high school. The two teaching methods (traditional and experimental) were described. The experimental period lasted for 19 weeks, each class meeting for 40 minutes twice a week. The Kwalwasser-Ruch Test of Musical Accomplishment was given to all subjects both before and after the experimental period. The researcher served as the teacher for all groups during the experimental period. When mean scores on the K-R test were compared between groups it was found that the sixth grade experimental groups improved more in achievement than the control groups. However, in grades seven and eight, the experimental groups were lower than the control groups.

APPENDIX B

Other Studies Reviewed: 1930-1962

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APPENDIX B

Other Studies Reviewed: 1930-1962

The studies and reports listed below were reviewed, but were not included in the synthesis for one or more of the following reasons: (a) the title was misleading and/or the contents were not relevant to the definition of music education used in the project; (b) the study was an essay or polemic; (c) there was no clear statement of a problem or purpose; (d) the design used was inadequate or questionable; (e) the techniques utilized were not appropriate to the problem or design, or the techniques were misapplied; and (f) the results and conclusions drawn were not related to the stated problem or purpose or the design employed.

Abel, David W. "Adolescence and Adolescent Behavior Aspects Related to Music." Music Educ. J., 44 (September-October, 1957), 74-77.

Adams, Rosemary Frayser. "A Study of Community Services as Professional Laboratory Experiences in the Preservice Preparation of Teachers in Music at Knoxville College, Tennessee." Unpublished Doctoral Dissertation, New York University, 1961, (Ed.D.). (Univ. Micro. No. 61-2572; D.A. Vol. 22, p. 492).

Adams, Sterling C. "An Exploratory Study of the Application of Two Learning Theories to the Teaching of Piano." Unpublished Doctoral Dissertation, Indiana University, 1962, (Ph.D.). (Univ. Micro. No. 62-5003; D.A. Vol. 23, p. 2162).

Adee, William R. "An Investigation of Junior High School Students' Song Preference in Evanston, Illinois." Unpublished Master's Thesis, Northwestern University, 1959, (M.M.).

Adkins, Dorothy C., and Frederick G. Kuder. "The Relation of Primary Mental Abilities to Activity Preferences." Psychometrika, 5 (1940), 251-262.

Aftreth, Orville B. "The Principal's Role in the Music Program." Nat. Elementary Principal, 39:3 (December, 1959), 26-29.

Agnew, Jessie M. "Report on Radio Survey." The Yearbook of the Music Supervisors National Conference: Twenty-fourth Year, 1931. Chicago: Music Supervisors Nat. Conf., 1931, pp. 377-379.

Albert, Vernon F. "Theoretical and Experimental Analysis of Networks of Resonators and Their Application to the Production of Sound by the Vocal Tract." Unpublished Doctoral Dissertation, Temple University, 1951, (Ph.D.). (Univ. Micro. No. 60-4429; D.A. Vol. 22, p. 287).

Alexander, William P. "Hispanic Folk Music in Intercultural Education in New Mexico." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1961, (Ed.D.). (Univ. Micro. No. 61-5795; D.A. Vol. 22, p. 3217).

Allen, Edward D. "Some Contributions of Foreign Folklore to the Secondary School Curriculum." Unpublished Doctoral Dissertation, The Ohio State University, 1954, (Ph.D.). (Univ. Micro. No. 59-6615; D.A. Vol. 20, p. 2705).

Allen, Marie L. "The Temperature Coefficient of Frequency of Flue Pipes." Unpublished Master's Thesis, The University of Texas, 1940, (M.A.).

Allen, Mary E. "A Comparative Study of Negro and White Children on Melodic and Harmonic Sensitivity." J. of Negro Educ., 11 (April, 1942), 158-164.

Allen, Richard D., Walter Butterfield, and Marguerite Tully. Providence Inventory Test in Music. New York: World Book Co., 1932.

Allen, W. Dwight. "Philosophies of Music History: A Comparison-Study of General Histories of Music in Chronological Order and with Reference to the Cultural Setting: Analysis of the Uses of Analogy, and of Some Possibilities for New Comparison-Studies of Change and Continuity for Music Education and Musical Research." Unpublished Doctoral Dissertation, Columbia University, 1939, (Ph.D.).

Allen, Warren D. "Differences of Approach to Music Education Among the Colleges: The Effect Upon Entrance Credit." In Karl W. Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association: Thirty-third Series. Oberlin, O.: The Ass., 1939, pp. 160-167.

Allport, Gordon. "The Psychology of Participation." Occup. Psychol, 20 (April, 1946), 54-62.

Alper, Clifford D. "A Survey and Analysis of Voice Training Classes in the Secondary School." Unpublished Master's Thesis, University of Miami, 1956, (M.M.).

Altenburg, Johann E. "An Essay on the Instruction of the Noble and Musical Art of Trumpet and Kettledrum Playing, Chapters VIII-XV." Brass Quart., 1 (1958), 133; 2 (1958), 20.

American Association of School Administrators. "American School Buildings." Twenty-Seventh Yearbook of the American Association of School Administrators. Washington, D.C:, Nat. Educ. Ass., 1949.

Amend, John. "The Relative Emphasis on Academic Courses Versus the Arts and Student Activities in the High Schools of King County, Washington." Unpublished Doctoral Dissertation, New York University, 1961, (Ed.D.). (Univ. Micro. No. 62-1437; D.A. Vol. 22, p. 4211).

Ames, William H. "A Survey of Public High School Music Teachers Opinions Concerning Competition Music Festivals in the State of Washington." Unpublished Master's Thesis, State College of Washington, 1950, (M.A.).

Andersen, Arthur O. "The Educator's View of the Music Teacher." Music of the West, 5, (March, 1950), 9.

Anderson, James W. "A Master List of Topics and Objectives for General Music in Grades 7, 8, and 9 and Their Relative Importance in General Education." Unpublished Doctoral Dissertation, Boston University, School of Education, 1957, (Ed.D.). (Univ. Micro. No. 58-4584; D.A. Vol. 18, p. 876).

Anderson, John D. "An Evaluation of Preparation in Extra Curricular Activities by Secondary School Students." Unpublished Doctoral Dissertation, University of Pittsburg, 1941, (Ph.D.).

Anderson, Joseph C. "An Analysis of State Courses of Study in Music Education at the Junior High School Level." Unpublished Master's Thesis, University of Denver, 1951, (n.d.).

Anderson, Robert E. "A Study of the Pertinence and Relationship of Selected Factors of the Special and Professional Phases of Undergraduate Music Teacher Education to Public School Music Teaching in Ohio." Unpublished Doctoral Dissertation, The Ohio State University, 1960, (Ph.D.).

Andrews, Frances M. "The Development of a Rehearsal Technique for a Secondary School Choral Group Based on the Use of the Magnetic Tape Recording Machine as a Tool for the Choral Director." Unpublished Doctoral Dissertation, Pennsylvania State College, 1948, (Ed.D.).

Andrews, Frances M. (Ed.). "Music - A Vital Force in Today's Secondary Schools." Bull. Nat. Ass. Secondary-School Principals, 43: 245, (March 1959), 1-115.

_____. "Resources for Music Instruction." In Music Education for Elementary School Children. Chicago: Music Educ. Nat. Conf., 1960, pp. 28-30.

_____. Resources for Music Instruction." Nat. Elementary Principal. 39:3 (December, 1959), 30-32.

Andrews, J. Austin. "Handbook of Magnetic Tape Recordings for the Music Educator." Unpublished Project Report, Teachers College, Columbia University, 1954, (Ed.D.).

Annable, P. C. "The Teaching of Foreign Language Diction to Music Students." Nat. Ass. Teachers Singing, Bull., 12 (May, 1956), 21.

Anno, Janet W. "The Effect of Background Music on a Group of Third-Grade Children." Unpublished Master's Thesis, The Ohio State University, 1958, (M.A.).

Ansberry, Merle. "The Effect upon the Ability to Discriminate Between Speech Sounds by the Elimination of Frequencies Above 4000 Cycles." Q. J. Speech, 23 (1938), 381-389.

Antonowich, Alexander. "Television in Music Education." Unpublished Project Report, Teachers College, Columbia University, 1949, (Ed.D.).

Antrim, Doron K. "Music to Live By." Etude, 71 (June, 1953), 19.

Appelman, Dudley R. "A Study by Means of Planigraph, Radiograph and Spectrograph of the Physical Changes Which Occur During the Transition from the Middle to the Upper Register in Vocal Tones." Unpublished Doctoral Dissertation, Indiana University, 1953, (Ph.D.). (Univ. Micro. No. A54-215; D.A. Vol. 14, p. 147).

Armour, Eugene. "The Melodic and Rhythmic Characteristics of the Music of the Traditional Ballad Variants found in the Southern Appalachians." Unpublished Doctoral Dissertation, New York University, 1961, (Ph.D.). (Univ. Micro. No. 62-1409; D.A. Bol. 22, p. 4368).

Arnott, Virginia H. "Approaches to Creative Dance with Demonstration at the College Level." Unpublished Master's Thesis, Western State College, 1953, (M.Ed.), 102 pp.

Arnstine, Donald G. "The Aesthetic Dimension of Value Education." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ph.D.). (Univ. Micro. No. 61-79; D.A. Vol. 21, p. 2620).

Arts, J. "Jottings from My Experiences with the Sound of Bells." J. Acoust. Soc. Amer., 17 (1946), 231.

_____. "The Sounds of Bells." J. Acoust. Soc. Amer., (April, 1939), 327-329.

Auburn, Corisande. "Teacher-Training Institutions in Relation to the Apparent Widespread Lack of Teacher Understanding Concerning Junior High Vocal Phenomena and its Choral Potential." Unpublished Master's Thesis, Florida State University, 1953 (M.M.E.).

Aukerman, R. R. "Experiment in Student Teaching." Music Educ. J., 39 (January, 1953), 55-56.

Bachem, A. "Musical Memory-Mechanisms." Amer. J. Psychol., 56:2 (1954), 360-363.

Bacon, Francis L. "Is Music Essential to the Curriculum?" Music Supervisors J., 18, (May, 1932), 16-17.

Bagley, William, Jr. "Radio in Education." In Yearbook of the Music Supervisors National Conference: Twenty-fourth Year, 1931. Chicago: Music Supervisors Nat. Conf., 1931, pp. 310-314.

Bailey, Francis L. "Music for All." Nation's Schools, 28 (August, 1941), 43-44.

Bailey, Richard. "Equipment and Material for Band and Orchestra." In Yearbook of the Music Supervisors National Conference: Twenty-fourth Year, 1931. Chicago: Music Supervisors Nat. Conf., 1931, pp. 55-56.

Baird, Forrest J. "A Follow-up Inquiry of Secondary School Music Teachers Prepared at San Jose State College." Unpublished Doctoral Dissertation, Stanford University, 1955, (Ed.D.). (Univ. Micro. No. 56-454; D.A. Vol. 16, p. 288).

_____. "Music Teaching Competences in California." J. Res. Music Educ., 6, (Spring, 1958), 25-31.

_____. "Competences for Professional Music Teachers." Educ. Music Magazine, 36:8, (January, 1957), 10.

Baisden, L. B. and W. J. Burkhard. "Children's Preferences in School Subjects and the Curriculum." In Richard B. Farnsworth, et.al. (Ed.), Children's Interest: Elementary School Level. Twelfth Yearbook of the California Elementary School Principal's Association. Sacramento: The Association, 1940, pp. 41-47.

Baker, Helen G. "Growth Through Music: Wilmington, Delaware, Public Schools." Unpublished Project Report, Teachers College, Columbia University, 1945, (Ed.D.).

Baker, P. C., K. B. Fitzhugh, R. W. Heath, and H. H. Reumers. "Musical Knowledge and Some Social Values of High School Youth." Purdue Opinion Panel Report, 15:2, (1956), 6.

Bakes, F. P. "Effect of Response to Auditory Stimulation on the Latent Time of Blocking of the Berger Rhythm." J. Exp. Psychol., 24 (1939), 406-418.

Bakkegard, B. M. "Public School Music as a Public Relations Agent." Music Educ. J., 39, (September-October, 1952), 61-63.

_____. "Teaching as a Career." School Musician, 26, (March, 1955), 22.

Bakkegard, Benjamin J. "Utilizing Community Music Resources to Improve Rural Living." Unpublished Project Report, Teachers College, Columbia University, 1948, (Ed.D.)

Barbara, D. A. (Ed.). Psychological and Psychiatric Aspects of Speech and Hearing. Springfield: Thomas, 1960.

Barbour, James M. "Music and Electricity." In Karl W. Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association: Thirty-second Series. Oberlin, O.: The Ass., 1938, pp. 250-258.

Barnes, Fred P. "The Elementary School Textbook: A Pedagogical Dilemma." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1952. (Ed.D.).

Barnes, James W. An Experimental Study of Interval Drill as It Affects Sight Singing Skill. Unpublished Doctoral Dissertation, Indiana University, 1960, (Ph.D.). (Univ. Micro. No. 60-2799; D.A. Vol. 21, p. 920).

Barrett, James H. "The Education of the Music Teacher." Unpublished Doctoral Dissertation, Colorado State College of Education, 1950. (Ed.D.).

Barrett, Roger L. "A Study of the General Nature of Ideational Perception: Music." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-5543; D.A. Vol. 22, p. 2814).

Barry, Margaret L. "A Study of the Musical Attitudes and Interests of 479 High School Students." Unpublished Master's Thesis, University of Texas, 1945, (M.M.).

Baumgardner, Kenneth W. "The Status of Senior High School Choral Music in the State of Texas." Unpublished Master's Thesis, University of Texas, n.d., (M.M.).

Beall, Lee M. "Elementary and Junior High School Voice Training, Visual Analysis, and Aesthetics of Listening: An Analysis of the Literature and an Application in a Specific Area." Unpublished Doctoral Dissertation, The American University, 1958, (Ed.D.). (Univ. Micro. No. 58-2804; D.A. Vol. 19, p. 469).

Bean, Kenneth L. "Experimental Approach to the Reading of Music." Psychol. Monogr., 50:6 (Whole No. 226), 1938?.

_____. "Reading Music Instead of Spelling It. J. Musicology, 1, (1939), 1-5.

Beattie, J. W. "Music Education in 1975." Educ. Music Magazine, 35, (January-February, 1956), 11-12.

Beaver, Howard J. "Lumberjack Band Administrative Procedures." Unpublished Master's Thesis, Arizona State College, 1955.

Becker, William R. "The Effects of Overlearning, Initial Learning Ability and Review Upon the Music Memory of Junior High School Cornet and Trumpet Players." Unpublished Doctoral Dissertation, State University of Iowa, 1962, (Ph.D.). (Univ. Micro. No. 62-4963; D.A. Vol. 23, p. 1729).

Beebe - Center, J. G. The Psychology of Pleasantness and Unpleasantness. New York: D. Van Nostrand Co., Inc., 1932.

Beecher, Dick H. "Retrospect." Unpublished Master's Thesis, Utah State University, 1961.

Beggs, George E., Jr., and C. C. Brigham. "And How is your Phonograph?" Music Educ. J., 26, (March 1940), 44-46.

Behrens, F. W. R. "Advantages for Rural School Music of a County-wide Organization." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1936. Chicago: Music Educ. Nat. Conf., 1936, pp. 177-180.

Beldoch, Michael. "The Ability to Identify Expressions of Feelings in Vocal, Graphic and Musical Communication." Unpublished Doctoral Dissertation, Columbia University, 1961, (Ph.D.). (Univ. Micro. No. 61-3416; D.A. Vol. 22, p. 1246).

Belfour, C. Stanton. "What have Contests Done for Music Education." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1936. Chicago: Music Educ. Nat. Conf., 1936, pp. 340-343.

Beloof, Elmer R. "Music in General Education for Teachers." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1950, (Ed.D.).

Belstrom, LaVere E. "A Study of the Pre-Service Training of the Elementary School Teacher in the Teaching of Music." Unpublished Doctoral Dissertation, University of Colorado, 1950, (Ed.D.).

Benn, Oleta A. "Architectural Acoustics." Music Educ. J., 28:4 (February-March, 1942), 32-34.

Benn, Oleta A. "Esthetics for the Music Educators: The Maturation of the Esthetic Sense." J. Res. Music Educ., 4, (Fall 1956), 123-133.

_____. "The Principal's Influence on Our Cultural Life." The Nat. Elementary Principal, 39:3, (December, 1959), 23-25.

Bennett, Fred A. "The Relationship Between Participation in Student Activities in Certain New York State High Schools and Later Civic and Social Participation." Unpublished Doctoral Dissertation, Cornell University, 1956, (Ph.D.). (Univ. Micro. No. 56-2150; D.A. Vol. 16, p. 1369).

Berg, Richard C. "The Teaching of Music on a Series of Telecasts Sponsored by the Regents Educational Television Project." Unpublished Project Report, Teachers College, Columbia University, 1961, (Ed.D.).

_____. "Will Television Be Available for Education?" Music Educ. J., 37, (January, 1951), 22.

Bergan, Hal A. "A Study of Drop-Outs in Instrumental Music in Five Selected Schools in Michigan." Unpublished Doctoral Dissertation, Michigan State University, 1957, (Ed.D.). (Univ. Micro. No. 58-154; D.A. Vol. 18, p. 114).

Bergethon, Bjornar. "Toward Improving Music Teacher Education." Educ., 76, (March, 1956), 431-435.

_____. "An Orientation in School Music Teacher Education." Unpublished Project Report, Teachers College, Columbia University, 1946, (Ed.D.).

Berner, Jeanette C. "Music." In Helen L. Cohen, and Nancy G. Coryell, (Ed.), Educating Superior Students, New York: The Amer. Book Co., 1935, pp. 244-266.

Bernstein, Benjamin B. "An Analysis of Full Time Summer Music Programs Sponsored for Secondary School Students by Publicly Supported American Universities and Colleges." Unpublished Doctoral Dissertation, The University of Nebraska Teachers College, 1960, (Ed.D.). (Univ. Micro. No. 60-5561; D.A. Vol. 21, p. 2316).

Best, Clarence J. "Equipping the Music Department." Amer. School and Univ., 18, 1946, 184-191.

Bevins, Alice E. "What Materials Shall Be Used to Teach Music in Elementary Schools." Educ., 56, (May, 1936), 536-540.

Bibler, Mary E. "A Study of the Boys' Glee Club in a Junior High School." Unpublished Master's Thesis, The Ohio State University, 1955, (M.A.).

Biggs, Millard R. "An Evaluation of a Technique Employing the Use of the Magnetic Tape Recorder in Teaching of Students of Brass Instruments." Unpublished Doctoral Dissertation, State University of Iowa, 1960, (Ph.D.). (Univ. Micro. No. 60-5641; D.A. Vol. 21, p. 1961).

Bilger, Robert C. "A Comparison of Monaural and Binaural Listening in Three Levels of Ambient Noise." Unpublished Doctoral Dissertation, Purdue University, 1954, (Ph.D.). (Univ. Micro. No. A54-3183; D.A. Vol. 14, p. 2131).

Biondo, Charles A. Music Aptitude Test Battery. Cleveland, O.: Scherl and Roth, 1962.

Birch, Thomas E. "Musical Taste as Indicated by Records Owned by College Students with Varying High School Music Experiences." Unpublished Doctoral Dissertation, University of Missouri, 1962, (Ed.D.). (Univ. Micro. No. 62-6395; D.A. Vol. 23, p. 2545).

Birge, Edward B. "Appreciation as a Basis of School Music." The Musician, 36:9, (September, 1931), 19.

Birge, Edward B. "How to Win Community Support for Public School Music." The Musician, 35:9, (September, 1930), 13.

_____. "Kansas Combines Festival - Contest Idea." The Musician, 35:5, (1930).

_____. "Music in the Public Schools." The Musician, 36:5, (May, 1931), 16.

_____. "Relationship between the MTNA and the Public School Music." The Musician, 36:1, (January, 1931), 9.

Bishop, Dorothy. "Training the Classroom Teacher for Keyboard Experience." Music Educ. J., 43, (February, 1957), 69.

Bishop, Merrill. "The Psychology of Music Participation." Music Educ. J., (November-December, 1953), 46.

Blair, G. M. "Subject Preferences of Mentally Superior and Inferior Senior High School Students." J. Educ. Res., 33, (1939), 89-92.

Blakely, Lloyd G. "A Survey of the Status, Duties, Services, and Functions of the Office of the State Supervisor of Music." J. Res. Music Educ., 8, (Fall, 1960), 99-109.

Blanchard, Marvin L. "A Proposed Program in Instrumental Music Designed to Promote Selected Aspects of Musical Growth." Unpublished Master's Thesis, The Ohio State University, 1961, (M.A.).

Blankenship, J., R. B. Fitzgerald, and R. N. Lane. "Comparison of Objective and Subjective Observations on Music Rooms." J. Acoust. Soc. Amer., 27, (1955), 774-780.

Blanton, Wincie Lowe. "An Experimental Application of Language Theory, Learning Theory, and Personality Theory to Evaluate the Influence of Music in Language Learning." Unpublished Doctoral Dissertation, University of Texas, 1962, (Ph.D.). (Univ. Micro. No. 62-2534).

Blind, E. E. "An Experiment with Monotones." Educ. Music Magazine, 18, (March-April, 1934), 55.

_____. "An Experiment with Monotones." Music Educ. J., 24:5 (March, 1938), 37-39.

Blom, Eric. "The Happy Ending." Monthly Musical Record, 70-816, (May, 1940), 81-87.

Blyler, Dorothea M. "The Music Appreciation Course in General Education." Educ. Administration and Supervision, 36, (February, 1950), 65-82.

_____. "Pretraining Selection of Teachers with Emphasis on the Field of Music." Educ. Administration and Supervision, 29, (March, 1943), 129-150.

Boekelheide, Viola E. "Some Techniques of Assessing Certain Basic Music Listening Skills of Eight and Nine Year Olds." Unpublished Doctoral Dissertation, Stanford University, 1960, (Ed.D.). (Univ. Micro. No. 60-6699; D.A. Vol. 21, p. 3111).

Boggs, Grace B. "Laboratory Experiences in Music Education Prior to Student Teaching at Morris Brown College, Atlanta, Georgia." Unpublished Project Report, Teachers College, Columbia University, 1955, (Ed.D.).

Bohman, Ester L. and Josephine Dillon. "The Librarian and the Teacher of Music." Amer. Library Ass., 1943.

Bohn, Russel K. "An Evaluation of Music Theory and Harmony Classes in Selected Public High Schools of Pennsylvania." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1957, (Ed.D.). (Univ. Micro. No. 57-4588; D.A. Vol. 17, p. 2870).

Bolles, Robert S. "A Compendium of Solo Flute Literature for Teachers and Students of the Flute." Unpublished Project Report, Teachers College, Columbia University, (1948), (Ed.D.).

Bolstad, Donald. "The Role of the Otolaryngologist in Relation to the Problem Voice." In E. Thayer Gaston (Ed.), Music Therapy 1955. Lawrence, Kansas: Nat. Ass. Music Therapy, Inc., 1956, pp. 116-119.

Borchers, Orville J. "The Psychology of Music in Relation to Music Education." In Karl W. Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association: Thirty-second Series. Oberlin, O.: The Ass., 1938, pp. 67-78.

Botkin, Benjamin A. "The American Play-Party Song: With a Collection of Oklahoma Texts and Tunes." Unpublished Doctoral Dissertation, University of Nebraska, 1931, (Ph.D.).

Botner, Taft B. "An Analysis of Supervised Student Teaching in Kentucky." Unpublished Doctoral Dissertation, University of Kentucky, 1950, (Ed.D.).

Bouldin, Arthur W. "A Survey of the Vocal Music Program in the Negro Schools in the Tidewater Area of Virginia." Unpublished Master's Thesis, Boston University, 1956, (M.M.Ed.).

Bowling, Donald G., and Leon Karel. "Research and Progress in the Allied Arts." Mo. J. Res. Music Educ., 1:1 (1962), 37.

Boyd, Maurice O. "An Investigation and Evaluation of Music Education in the State of Wisconsin." Unpublished Doctoral Dissertation, University of Wisconsin, 1942, (Ph.D.).

Boyd, Silas L. "The Music Preparation of General Elementary Teachers in State Supported Colleges and Universities." Unpublished Doctoral Dissertation, Indiana University, 1961, (Ed.D.). (Univ. Micro. No. 61-4896; D.A. Vol. 22, p. 4036).

Boyer, George F. "An Evaluation of the Course Content of Basic Music Theory in the Music Education Curriculum as Determined by a Job-Analysis of Secondary School Music Teachers in the State of Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1958, (Ed.D.). (Univ. Micro. No. 58-2340; D.A. Vol. 19, p. 147).

Bradford, Henry, Jr. "Teaching Fundamentals of Music to Freshman Education Students Through the Use of Music Literature at Alabama Agricultural and Mechanical College, Normal, Alabama, Vols. I & II. Unpublished Project Report, Teachers College, Columbia University, 1961, (Ed.D.).

Braucher, Frederick A., Jr. "Some Characteristics of Aesthetic Appreciative Behavior in Response to Non-programmatic Symphonic Music." Unpublished Doctoral Dissertation, University of Chicago, 1954, (Ph.D.). (Univ. Chicago Micro. No. 2584).

Braunagel, Robert T. "Some Effects of Pre-college Influences upon Musical Interests of College Students." Unpublished Master's Thesis, University of Texas, 1947, (M.M.).

Bray, Marianne. "A Comparative Review of the Educational, Vocational and Avocational Experiences of the Graduates of the School of Music, Northwestern University." Unpublished Doctoral Dissertation, Northwestern University, 1954, (Ph.D.). (Univ. Micro. No. A54-2581; D.A. Vol. 14, p. 1756).

Breitenfeldt, Dorvan H. "An Electromyographic Investigation of Respiratory Muscle Activity During Normal and Simulated Nasalized Vocalization." Unpublished Doctoral Dissertation, Southern Illinois University, 1962, (Ph.D.). (Univ. Micro. No. 63-1475; D.A. Vol. 23, p. 3020).

Brickman, H. R. "Psychiatric Implications of Functional Music For Education." Music Educ. J., 36, (June-July, 1950), 29-30.

Bridge, Thomas C. "A Study of the Music and Non-Music Requirements in Music Education Curriculums." Unpublished Doctoral Dissertation, University of Michigan, 1957, (Ed.D.). (Univ. Micro. No. 58-1381; D.A. Vol. 18, p. 2161).

Briner, Norma Stone. "Some Formative Influences in the Lives of Creative Workers in Two Fields." Unpublished Master's Thesis, The Ohio State University, 1959, (M.A.).

Broadbent, D. E. "Effects of Noise on Behavior." In C. M. H. Harris (Ed.), Handbook of Noise Control. New York: McGraw-Hill and Co., 1957.

Brody, V.A. "The Role of Body-awareness in the Emergence of Musical Ability: Its Application to Music Education, The College Basic Music Course, and Critic Teaching." J. Res. Music Educ., 1, (Spring, 1953), 21-24.

Broman, Keith L. "The Effects of Subjective Rhythmic Grouping Observed Under the Influence of Variable Rates, Frequencies, Numbers, and Tonal Stimuli." Unpublished Doctoral Dissertation, Indiana University, 1956, (Ph.D.). (Univ. Micro. No. 56-5348; D.A. Vol. 16, p. 2535).

Bronson, Howard C. "The Musical Activities of the Morale Branch." In Theodore M. Finney (Ed.), Volume of Proceedings of the Music Teachers National Association: Thirty-sixth Series. Pittsburgh: The Ass., 1942, pp. 18-23.

Brown, Calvin S. Music and Literature: A Comparison of the Arts. Athens, Ga.: Univ. of Georgia Press, 1948.

_____. "Triumphant Repetition in Music." Kenyon Review, (Winter, 1941), 52-62.

Brown, Clifford W. "The State Supervisor of Music." Music Educ. J., 33, (April, 1947) 40-42.

Brown, Irene R. "Inquiry into the Function of a Music Supervisor in the Community School." Unpublished Master's Thesis, Arizona State College, 1957, (M.A.).

Brown, John H. "Competences Eight Accredited Tennessee Institutions are Attempting to Develop in Elementary School Teachers." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1960, (Ed.D.). (Univ. Micro. No. 60-5853; D.A. Vol. 21, p. 22-83).

Brown, Lehland H. "Planning Schools With a View to High Level Daylight in Every Classroom." In American School and University Yearbook: Fourteenth Annual Edition. New York: Amer. Sch. Pub. Corp., 1942, pp. 57-61.

Brown, R. D. and Harlow Berquist. "An Instrumental Program in a Junior High School." Nat. Ass. Secondary School Principals, 40, (November 1956), 96-99.

Brown, Roberta W. "A Preliminary Study of the Touch Method of Learning Piano Music." J. Applied Psychol., 18, (1934), 516-527.

_____. "The Relation between Age (Chronological and Mental) and Rate of Piano Learning." J. Applied Psychol., 20, (August, 1936), 511-516.

_____. "The Relation Between Two Methods of Learning Piano Music." J. Exp. Psychol., 16, (1933), 435-441.

Bruce, Edna M. "An Investigation of Glee Club Activities in the Secondary Schools of California." Unpublished Master's Thesis, University of Southern California, 1937, (M.S.).

Brueckner, L. J. "Factors Conditioning the Development of Attitudes." J. Educ. Res., 38, (February, 1945), 470-473.

Bruggman, Joseph E. "A Compendium of Selected Solo Cornet/Trumpet Literature for Students and Teachers." Unpublished Project Report, Teachers College, Columbia University, 1949, (Ed.D.).

Bryan, Janice W. "An Experimental Approach to Building a Choral Vocabulary for Choral Groups." Unpublished Master's Thesis, University of Southern California, 1941, (M.M.).

Bryan, Roy C. "The Evaluation of Student Reaction to Teaching Procedure." Kalazazoo, Mich.: Western Michigan College, Graduate Division, 1945.

Bryant, J. V. "What to Look for in a Music Teacher." Clearing House, (March 1947), 428-429.

Bryant, Joyce M. "State Certification Requirements for Public School Music Teachers." Unpublished Master's Thesis, Florida State University, 1952, (M.M.Ed.).

Buchanan, W. "The Nature of Rhythmic Talent." Pacific Spectator, 3, (1951), 342-347.

Buchanan, Walter. "Comparison of Fixed and Movable Solfege in Teaching Sight Singing from Staff." Unpublished Doctoral Dissertation, University of Michigan, 1946, (Ph.D.). (Univ. Micro. No. A50-496; D.A. Vol. 10, p. 80).

Buechner, Alan C. "Team Teaching in Elementary Music Education." Music Educ. J., 50:2, (November-December, 1963), 31-35.

Bulber, Francis G. Teacher Activities of the Vocal School Music Program. Nashville, Tennessee: George Peabody College for Teachers, Bureau of Publications, 1948, (Ph.D.).

Burkholder, Kenneth. "A Follow-up Study of 331 Academically Talented Students Who Graduated from Omaha North High School During 1953 to 1958." Unpublished Doctoral Dissertation, The University of Nebraska Teachers College, 1959, (Ed.D.). (Univ. Micro. No. 59-4365; D.A. Vol. 20, p. 3141).

Burnett, Walter J. "A Study of School Music Contests and Festivals in the United States." Unpublished Master's Thesis, University of Mississippi, 1960, (M.M.).

Burns, S. T. "Experiment in Guidance." Music Supervisors J., 19 (November, 1932), 41.

_____. "An Experience with Sight-Singing Standards." School Music, 30 (May, 1930), 3.

_____. "The Louisiana Plan for Rural School Music." In Yearbook of the Music Educators National Conference: Thirty-first Year, 1938. Chicago: Music Educ. Nat. Conf., 1938, pp. 239-242.

_____. "The Value of Prognostic Tests for Instrumental Pupils." School Music, 31 (March-April, 1931), 6-9.

Burrows, Raymond M. "The Organization and Presentation of Elementary Piano Instruction to Meet the Needs of Students in New College and Teachers College." Unpublished Project Report, Teachers College, Columbia University, 1936, (Ed.D.).

_____. "Piano Classes are Fun." Nat. Elementary Principal, 30 (February, 1951), 34-36.

_____. "Present-Day Trends in Music Education." Teachers Coll. Record, 52 (January, 1951), 213-225.

Busche, H. E. "The College Treble Chorus; Its Composition Effective Accompaniment and Suitable Music." Etude: 73 (September, 1955), 17.

Buswell, G. T. "General Methods: Laboratory Experimentation." In Guy M. Whipple (Ed.), Yearbook of the National Society for the Study of Education, Part II. Chicago: The Society, 1938, pp. 307-318.

Cahn, M. M. "Tensions of Music Learning." Music Educ. J., 40, (April-May, 1954), 24-26.

California State Department of Education. Music Education in the Elementary School. Sacramento: Calif. State Dept. of Educ., 1939.

California-Western Conference Curriculum Committee. "Voice Training Classes." Music Educ. J., 31:6, (May-June, 1945), 40.

Callihan, James E. "Effect of Individual Vocal Study Upon the School Choral Program." Unpublished Master's Thesis, Montana State University, 1950, (M.M.).

Cameron, W. B. "Sociological Notes on the Jam Session." Social Forces, 33 (1954), 177-182. (P.A. Vol. 29, p. 501, No. 5337).

Campbell, I. "Basal Emotional Patterns Expressible in Music." Amer. J. Psychol. 55, (1942), 1-17.

Campbell, Jay J. "A Study and Appraisal of the Public School Music Program in the San Luis Valley of Colorado." Unpublished Doctoral Dissertation, University of Utah, 1957, (Ed.D.). (Univ. Micro. No. 58-4598; D.A. Vol. 18, p. 898).

Canfield, S. T. "Research Applied to Creative Music and to Power with Rhythm and Rhythm Notation." In Yearbook of the Music Educators National Conference: Twenty-eighth Year, 1934. Chicago: Music Educ. Nat. Conf., 1934, pp. 238-242.

Cannon, Allen E. "The Pedagogic Value of the Six Sonatas for Violin and Piano by George Friedrich Handel." Unpublished Doctoral Dissertation, Chicago Musical College, 1954, (Ph.D.).

Capper, Louis A. "A Study of Music Listening Habits of High-School Students." Unpublished Master's Thesis, Ohio State University, 1939, (M.A.).

Capurso, A. A. "The Effect of an Associative Technique in Teaching Pitch and Interval Discrimination." J. Appl. Psychol., 18, (1934), 811-818.

Carey, Margaretta A. "Music for the Educable Mentally Retarded." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1958, (Ed.D.). (Univ. Micro. No. 59-751; D.A. Vol. 19, p. 2967).

Carlson, Charles H. "A Study of the Secondary Music Program in Selected Central Schools of New York State, with 250 or Less Average Daily Attendance in Grades 7-12." Unpublished Project Report, Teachers College, Columbia University, 1959, (Ed.D.).

Carrico, John L. "A Study of Applied Music in Four-Year State-Supported Colleges of Texas." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1955, (Ed.D.). (Univ. Micro. No. 56-206; D.A. Vol. 16, p. 131).

Carson, Cleva. "The Inservice Training in Music of the Grade Teacher." In Yearbook of the Music Educators National Conference: Thirtieth Year, 1937. Chicago: Music Educ. Nat. Conf., 1937, pp. 190-195.

Carter, Elwyn. "Making Essential Provisions for Music and Drama Instruction." Mimeographed Report for Amer. Ass. School Administrators, Atlantic City, 1959.

Carter, Elwyn. "Music Buildings, Rooms and Equipment." Washington, D. C.: Music Educ. Nat. Conf., Bull. 17, 1955. 1-96.

_____. "Planning High School Music Areas." Amer. School Board J., 136, (March, 1958), 38-40.

_____. "Recordings Teach Musicianship." Music J., 15, (January, 1957), 33-34.

_____. "School Building Planning for Music and Drama." Music Educ. J., 45, (June 1959), 37-39.

_____. Music Skills and Competencies. Kalamazoo: Western Mich. Univ. Press, 1959.

Carter, Freddye Jr. "A Study of Approaches to Teaching Rhythm in the General Music Class of the Junior High School." Unpublished Master's Thesis, University of Texas, 1962, (M.M.).

Cash, Oliver P. "Instrumental Music in the Grades." Unpublished Master's Thesis, The Ohio State University, 1939, (M.A.).

Castro, Orfalinda G. "A Study of the Effects of Integrated Theory in a Junior High School Boy's Chorus." Unpublished Master's Thesis, University of Texas, 1956, (M.M.).

Cather, George D. "The Trend of Research Studies in Music Education at The University of Southern California, 1924-1949." Unpublished Master's Thesis, University of Southern California, 1950, (M.M.). (Univ. S. C. Micro. No. 39-420).

Cattell, R. B., and D. R. Saunders. "Music Preferences and Personality Diagnosis." J. Soc. Psychol, 39 (February, 1954), 3-24.

Cawthon, Mildred G. "A Plan for the Teaching of Musicianship and Music Materials Classes to Elementary Education Majors at San Diego State College." Unpublished Project Report, Teachers College, Columbia University, 1960, (Ed.D.).

Cecil, Herbert. "Fundamental Principles of the Organization, Management, and Teaching of the School Band." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1953, (Ph.D.).

Chadwick, J. Elbert. "Predicting Success in Sightsinging." J. App. Psychol., 17 (1933), 671-674.

Charles, Henry. "The Effects of Instrumental Training Upon Vocal Production." Unpublished Master's Thesis, Illinois Wesleyan University, 1945, (M.M.).

Charles, Norman. "Social Values in American Popular Songs (1890-1950)." Unpublished Doctoral Dissertation, University of Pennsylvania, 1958, (Ph.D.). (Univ. Micro. No. 58-3313; D.A. Vol. 19, p. 783).

Cheney, Edward A., and Byron O. Hughes. "Dento-Facial Irregularity and Embouchure." Etude, 64:7, 8, and 9 (July, August, September, 1946).

Chenoweth, Gene. "Personality-Music and the Child." Music Educ. J., 33, (September, 1946), 42-46.

Cheyette, Irving. "Teaching Instrumental Music in Public Schools." Unpublished Project Report, Teachers College, Columbia University, n.d., (Ed.D.).

Chidester, Lawrence W. and Christine B. Rockefeller. "Music Consultant Service for the Self-Contained Classroom." Music Educ. J., 41 (January, 1955), 19-20.

Chidester, Lawrence W., and Arnold M. Small. "The Preparatory Instruments, Part I: Some Scientific Aspects." Music Educ. J., 26:6, (March, 1940), 25

Choate, Robert. "Music Instruction in the Self-Contained Classroom." Nat. Elementary Principal, 30 (February, 1951), 9-11.

_____. "The Shaping Forces of Music in the Changing Curriculum." Music Educ., J., 47: 5 (1961), 29-32.

Chrisman, Miller L. "Preparation and Experience of the Music Teacher in Higher Education." Unpublished Doctoral Dissertation, University of Southern California, 1962, (Ed.D.). (Univ. Micro. No. 63-2143; D.A. Vol. 23, p. 3681).

Christeson, Wayne. "The Development of Musicianship in the High School Rehearsal.: Unpublished Project Report, Teachers College, Columbia University, 1947 (Ed.D.).

Christiansen, F. Melius. "Ensemble Singing." In Yearbook of the Music Supervisors National Conference: Twenty-fifth Year, 1932. Chicago: Music Supervisors Nat. Conf., 1932, pp. 121-124.

Christianson, Helen. Bodily Rhythmic Movements of Young Children in Relation to Rhythm in Music. New York: Bureau of Publications, Teachers Coll., Columbia Univ., 1938, (Ph.D.). (Contributions to Educ., No. 236).

Christiansen, Nels Woodruff. The Relation of Supervision and Other Factors to Certain Phases of Musical Achievement in the Rural Schools of Utah. New York: Bureau of Publications, Teachers Coll., Columbia Univ., 1948. (Contributions to Educ., No. 934).

Christy, Van A. "Evaluation of Choral Music." New York: Bureau of Publications, Teachers College, Columbia Univ., 1947.

Church, Norval L. "Provisions for Musical Activities in New High Schools." Amer. School and Univ., 5 (1932-1933), 222-226.

Cincinnati Public Schools, Department of Research, Statistics, and Information. "Practices Followed by Large City School Systems Relative to All-City Music Groups." Cincinnati, O.: Mimeographed Research Report, (June, 1955).

Claiborne, Robert W. "The Home-Made Instrument as a First Step in Music Education." The Musician, 35:7 (July, 1930), 7-8.

Clapp, P. G. "The Music Unit." Amer. School and Univ., 17 (1945), 132-133.

Clark, Edgar R. "Music Education in Negro Schools and Colleges." J. of Negro Educ., 9 (October, 1940), 580-90.

Clark, Grace. "Musical Talent of Farm Children." In Baldwin T. Bird, et. al., Farm Children: An Investigation of Rural Child Life in Selected Areas of Iowa. New York: D. Appleton and Co., 1930, 277-284.

Clarke, Stephen M. "Some Principles and Suggestions for the Teacher of Instrumental Music in the Junior High School." Unpublished Master's Thesis, The Ohio State University, 1951, (M.A.).

Clarke, Stephen M. "A Study of Practices in Student Teaching in Selected Universities with Recommendations for the Improvement of the Full-Time Student Teaching Program in Music at the Ohio State University." Unpublished Doctoral Dissertation, The Ohio State University, 1954, (Ph.D.). (Univ. Micro. No. 59-6628; D.A. Vol. 20, p. 2688).

Cleino, Edward H. "An Ensemble Method for Teaching Percussion Instruments." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958, (Ed.D.). (Univ. Micro. No. 59-1089; D.A. Vol. 19, p. 2967).

Clifford, Timothy F. "The Music Preparation of the Elementary Teacher." Unpublished Doctoral Dissertation, Boston University, 1955, (Ph.D.).

Clinton, Robert L., Jr. "An Evaluative Study of the Effectiveness of the Music Education Programs in Texas Colleges and Universities." Unpublished Doctoral Dissertation, Texas Techological College, 1962, (Ed.D.). (Univ. Micro. No. 62-4191; D.A. Vol. 23, p. 936).

Clippinger, David A. "On Becoming Musical." In Yearbook of the Music Supervisors National Conference: Twenty-sixth Year, 1933. Chicago: Music Supervisors Nat. Conf., 1933, 96-99.

Coffin, Berton. "A Handbook of Materials for Choral Programs: Mixed Voices, Vol. 1 & 2." Unpublished Project Report, Teachers College, Columbia University, 1950, (Ed.D.).

Coffman, A. R. "Is Rhythm Subject to Training?" School Musician, 21:1, (1949), 14-45.

Cohen, J. E. "Information Theory and Music." Behav. Sci., 7:2, (1962), 137-163.

Colby, M. G. "Needed Genetic Research as Related to Normal Human Living." In Theodore M. Finney Volume of Proceedings of the Music Teachers National Association: Forty-second Series. Pittsburgh: The Association, 1950, pp. 236-245.

Cole, Ward K. "A Study Concerning the Selection and Use of Mouthpieces for Brass Instruments." Unpublished Project Report, Teachers College, Columbia University, 1954, (Ed.D.).

Collier, Nina Perera. "A Music Teaching TV Experiment." Music Educ. J., 45, (November-December, 1958), 38-40.

Collins, Thomas C. "A Survey and Evaluation of the Class Wind Instrumental Programs in Some Representative Music Teacher Training Institutions with Some Suggestions for an Ideal Course of Study." Unpublished Doctoral Dissertation, State University of Iowa, 1950, (Ph.D.).

Conklin, F. Colwell. "A Balanced School Music Program." Music Educ. J., 24, (March, 1938), 34-35.

Connette, Earle. "Administrative Criticism of Music Teaching." J. of Educ. Res., 36:4, (December, 1942), 254-268.

_____. "A College Professor's Philosophy of Music Education." Nebraska Educ. J., 16, (October, 1936), 309.

_____. "Supervisory Procedures and Their Relative Desirability." J. of Educ. Res., 32, (November, 1938), 182-194.

Cook, O. "A Research Experiment in a Class-Piano." School Musician, 27, (November, 1955), 14.

Cook, Ronald W. (Chairman). "The Duties of a State Music Supervisor and/or Consultant." Unpublished Report of the Statewide Music Education Committee of the Music Educators National Conference, 1949, 23pp.

Cooke, James F. How to Memorize Music. Philadelphia: Theodore Presser Co., 1948.

Cooley, John C. "A Study of the Relation Between Certain Mental and Personality Traits and Ratings of Musical Abilities." Unpublished Doctoral Dissertation, Michigan State College, 1952, (Ed.D.). (Univ. Micro. No. A53-445; D.A. Vol. 13, p. 240).

Coons, E. and Kraehenbuehl, D. "Information as a Measure of Structure in Music." J. Music Theory, 1:2, (November, 1958), 127-161.

Cooper, Irvin. "The Boys' Changing Voice." Educ. Music Magazine, (September-October, 1955), 23-25.

Cooper, John J. "The Effect of Sectional and Nonsectional Seating Arrangements on Choral Tone, Intonation, and Ensemble." Unpublished Master's Thesis, University of Kansas, 1960, (M.A.).

Corey, V. B. "Change of Pitch of the Sustained Musical Note by Pinching the Jaws of the Observer." J. Acoust. Soc. Amer., 22, (September, 1950), 640.

Cornwall, J. Spencer. "Homogeneous Grouping of Pupils for Music Classes." Music Educ. J., 22, (September, 1935), 35.

Cort, Henry R., Jr. "Tempo and Expressive Properties of Auditory Figures: A Psychophysical Study." Unpublished Doctoral Dissertation, Cornell University, 1960, (Ph.D.). (Univ. Micro. No. 60-6499; D.A. Vol. 21, p. 2011).

Cory, Philip B. "A Survey of Noncompetitive Music Festivals." Music Educ. J. 37, (April-May, 1951), 34-36.

Cox, Ian. "Tone Deafness." Music Educ. J., 34:4, (1948), 62-63.

Crabb, Eugene N. "The High School Orchestra as an Integral Part of the Music Curriculum in Florida, 1920-1957." Unpublished Doctoral Dissertation, University of Southern California, 1959, (D.M.E.). (Univ. Micro. No. 59-1841; D.A. Vol. 20, p. 320).

Crocker, Richard. "The Place of Musical Style in the Teaching of Theory." Amer. Music Teacher, 10:5, (1961), 8-9.

Crockett, Frank., Jr. "An Analysis and Evaluation of the University of Texas Program of String Teacher Preparation." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ed.D.). (Univ. Micro. No. 61-107; D.A. Vol. 21, p. 3112).

Crowell, Wilhma S. "Beginning Sight Reading." In Yearbook of the Music Educators National Conference: Thirtieth Year, 1937. Chicago: Music Educ. Nat. Conf., 1937, p. 252.

Crumb, F. W. "Music Education in the Public Schools." Educ., 67, (November, 1946), 139-42.

Curry, E. Thayer. "Voice Changes in Male Adolescents." Laryngoscope, 56, (1946), 795-805.

Cuthbert, Kenneth. "The Place and Development of Small Ensemble Playing in Instrumental Music." Unpublished Project Report, Teachers College, Columbia University, 1947, (Ed.D.).

Dabney, Richard. "The Changing Voice of the Adolescent." In Yearbook of the Music Educators National Conference: Twenty-eighth Year, 1935. Chicago: Music Educ. Nat. Conf., 1935, pp. 310.

Dalby, Max F. "Psychology and Method in Teaching Woodwind Instruments." Unpublished Doctoral Dissertation, Utah State University, 1961, (Ed.D.). (Univ. Micro. No. 61-4925; D.A. Vol. 22, p. 1918).

D'Andrea, Frank L. "Beginning Instrumental Music Education in Pittsburgh." Unpublished Project Report, Teachers College, Columbia University, 1941, (Ed.D.).

_____. "Music and the Adolescent." Music Educ. J., 47, (February-March, 1961), 75-77.

Daniel, C. "Three Types of 'Like' Reactions in Judging Popular Songs: A Remark to the Preceding Article on the Program Analyzer." J. Appl. Psychol., 24, (1940), 746-748.

Dann, Hollis. "Voice Classification in Junior and Senior High Schools." In Yearbook of the Music Educators National Conference: Twenty-seventh Year. Chicago: Music Educ. Nat. Conf., 1937, pp. 267-269.

Darling, LeRoy W. "A Study in the Correlation Between Achievement in Music and Academic Studies." Unpublished Professional Paper, University of Idaho, 1941, (M.S.).

Darnes, George R. "The Development of a Pre-Doctoral Master of Music Education Degree Program." Unpublished Doctoral Dissertation, The University of Oklahoma, 1958, (Ed.D.). (Univ. Micro. No. 58-3864; D.A. Vol. 19, p. 1243).

Davidson, James W. "Construction and Appraisal of Procedures and Materials for Developing Consensus Regarding Music Education Programs." Unpublished Doctoral Dissertation, University of Illinois, 1954, (Ed.D.). (Univ. Micro. No. 7839; D.A. Vol. 14, p. 942).

Davidson, James W., and Charles Leonhard. "The Illinois Curriculum Program and Music Education." Music Educ. J., 39, (June, 1953), 40-42.

Davis, Ennis (Ed.). "Attitudes Toward Performance." Music J., 10:3, (March, 1952), 25.

_____. "The Listener Gets a Hearing." Music J., 10:2, (February, 1952), 17.

_____. "Quit Parade." Music J., 9:7, (November, 1951), 7.

_____. "The Researchers Relax." Music J., 10:5, (May, 1952), 13.

_____. "A Study of Music Attitudes and Participation Among American School Boys and Girls Under Twenty Years of Age." Music J., 9:5, (September, 1951), 29.

_____. "What Do They Think of Their Teachers?" Music J., 10:1, (January, 1952), 19.

_____. "What Makes a Musician; Stanford University Reports its Findings!" Music J., 11, (March, 1953), 11.

_____. "What Music Do Young People Prefer?" Music J., 9:6, (October, 1951), 11-13.

_____. "Why Study Music Anyway?" Music J., 10:4, (April, 1952), 11.

_____. "The Winners Have Been Chosen." Music J., 9:4, (April, 1951), 7-9.

Davis, John E. "A Study Designed to Improve Undergraduate Education for Teachers Conducting High School Choral Organizations." Unpublished Project Report, Teachers College, Columbia University, 1951, (Ed.D.).

Davis, Lytton S. "The Case of the Vanishing Music Student." Music Educ. J., 31, (September-October, 1944), 44.

Davison, Archibald T. "Sight-Reading in Music in the Grades." Harvard Educ. Rev., 7, (1937), 7-8.

Dawley, Mariel E., and Roberta McLoughlin. "Role of the Music Consultant." The Nat. Elementary Principal, 39:3, (December, 1959), 20-22.

Day, J. M. "The Development and a Projection of Music in the Loudonville, Ohio, School and Community." Unpublished Master's Thesis, The Ohio State University, 1960, (M.A.).

Deal, Patricia C. "The Analysis and Evaluation of Certain Seventh and Eighth Grade General Music Materials Published from 1950 Through 1960." Unpublished Master's Thesis, University of Oregon, 1961, (M.M. in Ed.).

Deamer, Arthur. "A Study of Public School Music Practices." Music Educ. J., 22, (October, 1935), 13-14.

Deaver, Sarah Dupree. "A Survey of the Musical Tastes of Children in the Fifth and Sixth Grades Outside of the School Music Program." Unpublished Master's Thesis, Northwestern University, 1956, (M.M.).

DeBruyn, J. W. "The New Awareness in Singing." The Southwestern Musician, 19:1 (September, 1952), 13; 19:2 (October, 1952), 10-11; 19:3 (November, 1952), 14-15.

Decherd, Emma V. "Radio Preferences of 200 High School Choral Music Students." Unpublished Master's Thesis, University of Texas, 1952, (M.M.).

Decker, Donald M. "Choral Procedures: Their Relevance to a Studied Group." Unpublished Master's Thesis, Eastern Illinois University, 1959, (M.S.).

DeJournett, Ned R. "An Investigation of the Effectiveness of Instrumentally-trained Vocal Directors as Compared with Vocally-trained Vocal Directors." Unpublished Master's Thesis, Northwestern University, 1962, (M.M.).

Dellinger, Hal D. "An Evaluation of Certain Symbolic Systems and Devices Commonly Used as Agencies for the Development of Tonal Thinking in Children." Unpublished Project Report, Teachers College, Columbia University, 1950, (Ed.D.).

Dengler, Clyde. "Class Vocal Methods - High School Level." In Yearbook of the Music Educators National Conference: Thirtieth Year, 1937. Chicago: Music Educ. Nat. Conf., 1937, pp. 273-274.

Dennis, Charles M. A Summary of the Course in Teaching of Secondary School Music. San Francisco: Board of Education, 1941.

Devlin, W. Madison. "Music Trends in Senior High Schools." Music Educ. J., 25, (December, 1938), 33.

DeWall, Lenore. "Selected Choral Groups in the Junior High School." Unpublished Master's Thesis, Northwestern University, 1949, (M.M.).

Dexter, Emily S. "Pitch Discrimination and French Accent on the High School Level." J. Appl. Psych., 18, (October, 1934), 717-720. (P.A. Vol. 19, p. 324, No. 2962).

Di Caprio, Alfred J. "High-School-Sponsored Community Bands and Orchestras as Community Services." Unpublished Doctoral Dissertation, New York University, 1950, (Ed.D.).

Diercks, Louis H. "Choral Performance Practices in Great Britain." Choral J., 7 (May, 1961).

_____. "A Prognostic Approach to the Choral Auditions." Choral J., 3:2, (November, 1962).

6

Dietrich, Sarah T. "Developing Musical Understanding in a Third Grade Class in Rockville Centre, New York, Through Use of Keyboard Experiences." Unpublished Project Report, Teachers College, Columbia University, 1961, (Ed.D.).

Dimitt, Gail. "An Investigation of Instruction in Vocal Music in the Public Schools of the United States." Unpublished Master's Thesis, University of Southern California, Los Angeles, 1934, (M.A.).

Doig, Dorothea. "Creative Music: I. Music Composed for a Given Text." J. of Educ. Res., 35:4, (December, 1941), 263-275.

_____. "Creative Music: II. Music Composed on a Given Subject." J. of Educ. Res., 35:5, (January, 1941), 344-55.

_____. "Creative Music: III. Music Composed to Illustrate Given Musical Problems." J. Educ. Res. 36:4, (December, 1942), 241-253.

Dominy, Elizabeth E. "Music Textbooks in Elementary Education: The Appropriateness of Current Textbook Material in Elementary School Music in Relation to the Aims and Purposes of Modern Elementary Education." Unpublished Doctoral Dissertation, New York University, 1958, (Ed.D.). (Univ. Micro. No. 58-5651; D.A. Vol. 19, p. 1779).

Dorn, Gerhardt G. "Harmonic Mutation as a Function of Stimulus Intensity." Unpublished Doctoral Dissertation, North Texas State College, 1955, (Ph.D.). (Univ. Micro. No. 55-1690; D.A. Vol. 15, p. 2540).

Douglass, Dean E. "County Music Supervision." Music Educ. J., 25:2, (October, 1938), 37-39.

Drake, Raleigh M. "How to Memorize Music Economically." Music Educ. J., (May, 1939), 38-39.

_____. "The Relation of Musical Talent to Intelligence and Success in School." J. Musicology, 2:1, (1940), 38-44.

Dreikurs, Rudolph. "The Impact of the Group for Music Therapy and Music Education." Music Therapy, 1959, 1960, 93-106.

Driscoll, Eileen V. "An Experiment in Music." In Yearbook of the Music Supervisors National Conference: Twenty-fourth Year, 1931. Chicago: Music Supervisors Nat. Conf., 1931, pp. 302-305.

Duckles, Vincent H. "A High School Course in Creative Music." Unpublished Project Report, Teachers College, Columbia University, 1944, (Ed.D.).

Duffield, Paul E. "Audio-Visual Aids for the Music Educator." Etude, 70, (March, 1952), 14.

_____. "The Teen-Agers Taste in Out-of-School Music." Music Educ. J., 37, (June-July, 19-20.

Duncan, Chester R. "Music as an Integral Program." In Yearbook of the Music Educators National Conference: Thirty-first Year, 1938. Chicago: Music Educ. Nat. Conf., 1938, pp. 359-364.

Dushkin, D. "Experiment in Music Education." Progressive Educ., 101, (March, 1933), 144-149.

Dvorak, Leo J. "An Analysis of Training Values in Selected Symphonic Masterpieces." Unpublished Doctoral Dissertation, University of Iowa, 1939, (Ph.D.).

Dvorak, Leo J. "Training Values in Symphony Music." Music Educ. J., 27, (October-November, 1940), 24.

Dykema, Peter W. "Music in the School Survey." Music Supervisors J., 17, (October, 1930), 20-21.

_____. "Scientific Aids to Music Education." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1936. Chicago: Music Educ. Nat. Conf., 1936, pp. 56-57.

_____. "Significant Relationships of Music to Other Subjects." In Guy M. Whipple (Ed.), Yearbook of the National Society for the Study of Education, Part II. Chicago: The Society, 1934.

_____. "Some Fundamental Questions About Music Reading." Music Educ. J., 35, (September-October, 1948), 24-26.

_____. "Teaching Music by Radio." Education on the Air, First Yearbook, Institute for Education by Radio. Columbus, O.: Ohio State Univ. Press, 1930, pp. 330-47.

_____. and Osbourne McConathy. "Music in Senior High Schools." Music Educ. J., 23, (October, 1936), 29-31.

Dyrud, Justin L. "A Study of the Qualifications and Experiences in Music of Elementary Classroom Teachers in the Public Schools of Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1959, (Ed.D.). (Univ. Micro. No. 59-4308; D.A. Vol. 20, p. 1818).

Eagen, T. E. "Relation of Music Achievement to Background." Music Educ. J., 36, (June-July, 1950), 42.

Earhart, Will. "Factors of Musical Appeal and Responses of Pupils to Them." Pittsburgh Schools, 3, (January-February, 1932), 68-80.

_____. "Foundations for Judgments in Music Education." Educ. Music Magazine, 33 (January, 1954), 6-9.

_____. "Research Applied to Creative Music and to Power with Rhythm. In Yearbook of the Music Educators National Conference: Twenty-seventh Year, 1934. Chicago: Music Educ. Nat. Conf., 1934.

_____. and Frank M. Gatto. "The Value of Instrumental Training in Public School Music: An Experimental Study." Pittsburgh Schools, (May-June, 1935), pp. 176-196.

Eberly, L. E. "Remedial Measures in Pitch Intonation." Teachers College Journal, 8 (January, 1937), 25-30.

Ebey, George W. "The Planning of the School Stage." Amer. School and Univ., 11 (1939), pp. 304-311.

Education of the Music Teacher: A Report Prepared by the Music in American Education Committee on the Education of the Music Teacher. In Music in American Education, Source Book No. 2. Washington, D.C.: Music Educ. Nat. Conf., 1955, p. 134.

Edwards, Mercedes. "An Investigation of Current Trends in the Functioning of Girls Glee Clubs in the Selected High Schools of California." Unpublished Master's Thesis, Occidental College, Los Angeles, California, 1959, (N.A.).

Edwards, P. "Suggestion for Simplified Musical Notation." J. of Acoust. Soc. Amer., 9:3, (January, 1940), 323.

Ehlers, Henry J. "The Development of a Simplified Instrumentation for Beginning Music Classes." Unpublished Doctoral Dissertation, University of Pittsburgh, 1941, (Ph.D.).

Ehlert, Jackson K. "Causes for Failure Among Music Teachers." Music Educ. J., 37 (January, 1951), 36.

Eicher, William T. "The Use of Professional Symphony Musicians as Instructors of Instrumental Music in the Public Schools." Unpublished Project Report, Teachers College, Columbia University, 1958, (Ed.D.).

Eisenberg, P. and H. A. Chinn. "Tonal Range and Volume Level Preferences of Broadcast Listeners." J. Exp. Psychol., 35 (1945), 374-392.

Ekstrom, Ellwood R. "Singing Intensity as Related to Singer Experience." Unpublished Doctoral Dissertation, Indiana University, 1959, (Mus. D.). (Univ. Micro. No. 60-390; D.A. Vol. 20, p. 3769).

Elliott, Lois, A. "A Survey of the Music Interests of Junior and Senior High School Pupils." Unpublished Master's Thesis, University of Southern California, Los Angeles, 1937, (M.S.).

Ellis, Howard E. "The Influence of Pestalozzianism on Instruction in Music." Unpublished Doctoral Dissertation, University of Michigan, 1957, (Ph.D.). (Univ. Micro. No. 58-1396; D.A. Vol. 18, p. 1806).

Elsmith, L. "Problems of Experimental Didactics in School Music Education in Pre-College Years." Unpublished Doctoral Dissertation, New York University, 1933, (Ph.D.).

Engelhardt, Nicholaus, Nickolaus Engelhardt, Jr., and Stanto Leggett. Planning Secondary School Buildings. New York: Reinhold Publishing Corp. 1949.

Engh, Beatrice. "An Investigation of the Effects of Ensemble Singing upon the Individual." Unpublished Master's Thesis, Northwestern University, 1954, (M.M.).

English, William S. "Learning Experiences that Prepare School Music Teachers for Selected Activities." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958, (Ph.D.). (Univ. Micro. No. 59-1096; D.A. Vol. 19, p. 2862).

Erb, J. Lawrence. "The Trend of Professional Education in Music." In Karl W. Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association: Twenty-fifth Series. Oberlin, O.: The Ass., 1931, pp. 9-20.

Ernest, David J. "An Analysis of the French Style of Oboe Performance." Unpublished Doctoral Dissertation, University of Colorado, 1961, (Ed.D.). (Univ. Micro. No. 62-1284; D.A. Vol. 22, p. 3218).

Erneston, Nicholas. "A Study to Determine the Effect of Musical Experience and Mental Ability on the Formulation of Musical Taste." Unpublished Doctoral Dissertation, The Florida State University, 1961, (Ph.D.). (Univ. Micro. No. 61-5637; D.A. Vol. 22, p. 2817).

Ernst, K. D. "Committee, Publication, Study and Research Activities Program." Music Educ. J., 45 (February, 1959), 34-35.

Ervin, Max T. "Techniques and Sources for Courses in Music Education Methods and Materials." Unpublished Project Report, Teachers College, Columbia University, 1954, (Ed.D.).

Esquivel, John, Jr. "The Influence of General Music on Attitudes and Scores of 263 High School Students." Unpublished Master's Thesis, University of Texas, 1957, (M.M.).

Eustis, Edwina. "Classification of Music." In Mariana Bing (Ed.), Music Therapy, 1953. Lawrence, Kansas: Nat. Ass. Music Therapy, Inc., 1954, pp. 49-55.

Evaluating the Music Education Curriculum. Music Educ. J., 39 (April, 1953), 34-36.

Evans, Edward G., Jr. "Music Appreciation by Television." Music Educ. J., 41 (November, 1954), 28-31.

Evans, J. Taste and Temperament. New York: Macmillan and Co., 1939.

Evanson, Jacob A. "Classroom Choral Technique." In Yearbook of the Music Supervisors National Conference: Twenty-fifth Year, 1932. Chicago: Music Supervisors Nat. Conf., 1932, pp. 140-149.

Ewald, George R. "School Sound Systems Heighten Efficiency." Radio Electronics in Educ., (1943), 18-20.

Ewald, Joseph F. "An Orientation Program for Secondary School Music Teachers in Chicago." Unpublished Doctoral Dissertation, Chicago Musical College, 1955, (D.M.Ed.).

Eubank, H. L. "A Wisconsin Experiment in Radio Teaching." Music Supervisors J., 17 (December, 1930), 29.

_____. "The Wisconsin Plan for Radio Development." Education on the Air, 1st Yearbook, Institute for Education by Radio, Columbus, O.: Ohio State University, 1930, 284-90.

'Experiment." Music J., 17 (January, 1959), 66-67.

Fain, Samuel S. "Objective Marking for Instrumental Music Students." In Yearbook of the Music Educators National Conference: Volume Thirty, 1939-1940. Chicago: Music Educ. Nat. Conf., 1940, pp. 254-256.

Farnsworth, Paul R. "An Analysis of the Behavior of Critics." Psych. Bull., 36 (1939), 648.

_____. "An Historical, Critical, and Experimental Study of the Seashore-Kwalwasser Test Battery." Genet. Psychol. Monogr., 9 (1931), 291-393.

_____. "Musicality and Abnormality." Confinia Psychiatrica, 4:3-4, (1961), 158-164.

_____. "Stereotyped Thinking in Music." Music Educ. J., 48:1 (1961), 101-103.

_____. and W. F. Poynter. "A Case of Unusual Ability in Simultaneous Tapping in Two Different Tones." Amer. J. Psychol., 43 (1931), 633.

Farwell, Gaylord H. "Curriculum Planning in Music Education: A Study of Certain Aspects of the Music Education Program in the Secondary School and the Involvement of Music Education Personnel in Organized Curriculum Planning Activities in Selected School Districts of Western New York." Unpublished Doctoral Dissertation, The University of Buffalo, 1962, (Ed.D.). (Univ. Micro. No. 62-4638; D.A. Vol. 23, p. 1231).

Faulkner, Maurice E. "The Roots of Music Education in American Colleges and Universities." Unpublished Doctoral Dissertation, Stanford University, 1956, (Ph.D.). (Univ. Micro. No. 56-1099; D.A. Vol. 16, p. 704).

Fay, R. Vernon. "Some Hints to Beginners in Choral Conducting." The School Musician, (February, 1951), 11-12.

Fellman, Charlotte. "The Development of Evaluative Criteria for the Area of Music in an Elementary School." Unpublished Master's Thesis, University of Boston, 1952, (M.Ed.).

Fergus, Patricia M. "Factors Affecting the Development of the Orchestra and String Program in Minnesota Secondary Schools, 1940-1960." Unpublished Doctoral Dissertation, University of Minnesota, 1960, (Ph.D.). (Univ. Micro. No. 61-561; D.A. Vol. 21, p. 2943).

Ferrell, John W. "A Validity Investigation of the Drake Musical Aptitude Tests. Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-5563; D.A. Vol. 22, p. 2818).

Fisher, J. "The Memory Process and Certain Psychosocial Attitudes, with Special Reference to the Law of Paragnanz. I. Study of Non-Verbal Content." J. Pers., 19:4 (June, 1951), 406-420.

Fisher, Seymour, and Rhoda Lee Fisher. "The Effects of Personal Security on Reactions to Unfamiliar Music." J. Soc. Psychol., 34 (1951), 265-273.

Fite, Elwin. "The Student Teaching Experience of Prospective Music Teachers." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1953, (Ed.D.). (Joint Univ. Lib. Micro.: not numbered).

Fjeld, Marvin W. "A Survey and Evaluation of Music Performed in Public Concert by Indiana High School Bands." Unpublished Doctoral Dissertation, Indiana University, 1959, (Ed.D.). (Univ. Micro. No. 59-6578; D.A. Vol. 20, p. 3570).

Flagg, Marion. "Elementary School Principal and His Music Program." Nat. Elementary Principal, 30 (February, 1951), 12-16.

_____. (Chariman). "Experiment in Teacher Training: Symposium Discussion." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1936. Chicago: Music Educ. Nat. Conf., 1936, pp. 116-118.

_____. "Experimental Projects in Music Education." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1936. Chicago: Music Educ. Nat. Conf., 1936, p. 276.

_____. "Tonal Learning, the Basic Factor in Musical Growth." Educ., 59, (May, 1939), 549-558.

Fletcher, Grant. "Improving Intonation Through Listening." Instrumentalist, 13:3 (November, 1958), 42.

_____. "Music Appreciation as an Aid in Band and Orchestra Instruction." Music Educ. J., (November, 1941), 24.

_____. "Rehearsal Techniques for Modern Music." Music J., 1 (September, 1946), 15.

_____. "Rhythm Instruction Methods Can Be Improved." The Baton, 10:1 (Autumn, 1941), 13.

Flora, Frank E. "Successful Administrative Relationships Make Successful Music Programs." Music Educ. J., 18:5 (1961), 66-67.

Foltz, D. G. "In the Brief time allotted -----." Educ. Music Mag., 29 (March-April, 1950), 31-36.

Ford, Margaret. "Vocal Music for Public Performance in the Junior High School." Unpublished Master's Thesis, Northwestern University, 1948, (M.M.).

Forward to the Fundamentals of Education: The Hartford Schools in 1936-1937. (Report of the Survey of the Public Schools of Hartford, Conn., 1937). New York: Bureau of Pub., Teachers College, Columbia Univ., 1937.

Foster, Lucille Estelle Caster. "Perceived Competencies of School Supervisors." Unpublished Doctoral Dissertation, Stanford University, 1959, (Ed.D.). (Univ. Micro. No. 59-2807; D.A. Vol. 20, p. 568).

Foster, William P. "Band Pageantry." Unpublished Project Report, Teachers College, Columbia University, 1955, (Ed.D.).

Fox, Florence C. Children's Preferences in Radio Programs. Washington, D. C.: U. S. Dept. Interior, 1930.

Fox, Leslie H. "Principles for Designing the High School Auditorium." Unpublished Doctoral Dissertation, New York University, 1960, (Ph.D.). (Univ. Micro. No. 60-3742; D.A. Vol. 21, p. 1288).

Fox, Lillian M. "Creative Music in the Learning Process." Calif. J. Elementary Educa., 5 (May, 1937), 235-243.

Franklin, Jeanne B. "A Survey and Analysis of Music Courses Offered the Prospective Elementary School Classroom Teacher in Teacher-Training Institutions of Southwestern United States." Unpublished Master's Thesis, Boston University, 1946, (M.A.).

Freeburg, Roy E. "The Use of Musical Resources of the Pacific Southwest Region for Elementary Education." Unpublished Doctoral Dissertation, Stanford University, 1946, (Ed.D.).

Fretwell, Elbert K. "Economy and Improvement of Extra-Curricular Activities in Secondary Schools." Nat. Educ. Ass. J., 22 (1933), 159-161.

Frey, E. F. "Three-Dimensional Living." Educ. Res. Bull., 19 (May 8, 1940), 293-297.

Friedman, Bernard. "An Evaluation of the Achievement in Reading and Arithmetic of Pupils in Elementary School Instrumental Music Classes." Unpublished Doctoral Dissertation, New York University, 1959, (Ed.D.). (Univ. Micro. No. 59-6219; D.A. Vol. 20, p. 3662).

Frodsham, Olaf M. "Vocal Music in the Secondary School Curriculum." Unpublished Master's Thesis, University of Redlands, 1937, (M.M.).

Frost, R. G. "Orff and Kodaly -- New Teaching Methods." Music J. 20 (February, 1962), 34.

Fullerton, C. A. "An Experiment in School Music." Music Educ. J., 22 (March, 1936), 26-27.

_____. "Experiments in Rural School Music and Their Results." Educ. Music Mag. 21 (March-April, 1942), 20-21.

_____. "Musical Growth Through Musical Experience." Mus. Educ. J., 27 (May, 1941), 18.

Funchess, Lloyd W. "Research is Needed in Music Education." Phi Delta Kappan, 30 (November, 1948), 349-350.

_____. "The State Supervisory Program of Music Education in Louisiana." Unpublished Project Report, Teachers College, Columbia University, 1946, (Ed.D.).

Funk, William R. "The Performance of Advanced Choral Literature by the High School Chorus." Unpublished Master's Thesis, University of Arizona, 1953, (M.A.).

G.V.W. "Teaching Monotones." Music Educ. J., 35 (February-March, 1949), 61-62.

Gabriel, Ralph. "Music Education and State Supervisory Services for Tennessee Public Schools." Unpublished Doctoral Dissertation, The Florida State University, 1962, (Ed.D.). (Univ. Micro. No. 63-1812; D.A. Vol. 23, p. 3920).

Gamble, Frank E. "A Study of Certification Requirements for Teachers of Public School Music." Unpublished Project Report, Teachers College, Columbia University, 1958, (Ed.D.).

Gaston, E. Thayer. "The Correlation of Fundamental Factors of Scholarship Necessary to the Success of Music Education." Unpublished Address: Music Educators National Conference. Colorado Springs, Colo., (April, 1944).

_____. "Factors Which Underlie the Development of a Research Program." J. Res. Music Educ.,3 (Spring, 1955), 21-22.

_____. "Values of Functional Music for Music Education." Educ., 69 (March, 1949), 396.

Gatwood, Robin F. "Part I: The Application of Certain Types of Electronic Equipment to the Teaching of Music. Part II: A Handbook for the Help and Guidance of Teachers of Applied Music. Unpublished Doctoral Dissertation, New York University, 1960, (Ed.D.). (Univ. Micro. No. 61-364; D.A. Vol. 21, p. 3478).

Geders, Sister Alphonse M. "A Method of Teaching Elementary Vocal Music Reading Based on Principles of Fixed Pitch." Mo. J. Res. Music Educ., 1:1, (1962), 56.

Gehrkens, Karl W. "Five Decades of Music Education." Educ., 76:7 (March, 1956), 395-407.

_____. "Musical Offerings in High School." Music Educ. J., 24 (September, 1937), 30-32.

_____. "The Psychological Basis of Conducting." Musical Quart., 21 (October, 1935), 437-441.

_____. "School Music Surveys." Music Supervisors J., 17 (March, 1931), 20.

Geiger, T. "A Radio Test of Musical Taste." Publ. Opin. Quart., 14 (1950), 453-460.

Gelineau, Ruth P. B. "Factors Influencing Attitudinal Variation Among Classroom Teachers in the Teaching of Music." Unpublished Doctoral Dissertation, The University of Connecticut, 1960, (Ph.D.). (Univ. Micro. No. 60-5230; D.A. Vol 21, p. 2610).

Gelvin, Miriam P. "A Comparative Analysis of the Preparation and Practices in Student Teaching in Music." Unpublished Doctoral Dissertation, Northwestern University, 1956, (Ph.D.). (Univ. Micro. No. 57-9232; D.A. Vol. 17, p. 2629).

Gerrish, Olive M. "Measuring the Musical Accomplishment of Young Children." Music Supervisors Nat. Conf., (1933), 297-305.

Gesler, Harriet L. "An Analysis of the Relation Between Pitch Discrimination and Phonic Sensitivity in First Grade Children." Unpublished Doctoral Dissertation, The University of Connecticut, 1958, (Ph.D.). (Univ. Micro. No. 58-3916; D.A. Vol. 19, p. 988).

Getchell, Robert W. "An Investigation of, and Recommendations for, the Beginning Conducting Class in the College Curriculum." Unpublished Doctoral Dissertation, State University of Iowa, 1957, (Ph.D.). (Univ. Micro. No. 57-4833; D.A. Vol. 17, p. 3038).

Gibson, J. C. "The Business Office Looks at the Band." School Business Affairs, 3 (May, 1938), 3.

Gildersleve, Glenn. "Rural Music Be's." Educ. Music Magazine, 19 (March-April, 1940), 4.

Gilliland, Dale V. "Vocal Music in Junior High School." In Yearbook of the Music Educators National Conference: Twenty-eighth Year, 1935. Chicago: Music Educ. Nat. Conf., 1935, pp. 307-308.

Gilmore, Robert C. "The Exposition and Development of an Aim and Guiding Principles for Teaching Music to Elementary Education Majors at Southwestern Louisiana Institute." Unpublished Project Report, Teachers College, Columbia University, 1957, (Ed.D.).

Glasgow, Robert B. "A Study and Evaluation of an In-Service Training Class in Music for Elementary Teachers." Unpublished Doctoral Dissertation, University of Oregon, 1961, (Ed.D.). (Univ. Micro. No. 61-4523; D.A. Vol. 22, p. 1514).

Glass, Phyllis. "The Effect of Favorable and Unfavorable Propaganda on the Rating of Classical Music by Students in the Seventh Grade General Music Class." Unpublished Master's Thesis, University of Kansas, 1959, (M.M.Ed.).

_____. "Part I: Orchestra Music for School and Community Orchestras Selected from Works by Viennese and Bohemian Composers (1750-1800). Part II: Prepared Scores." Unpublished Doctoral Dissertation, University of Southern California, 1962, (D.M.A.). (Univ. Micro. No. 62-6057; D.A. Vol. 23, p. 3921).

Glen, Louise. "A Study of the Song Choices of Children and Teachers of the Fourth, Fifth and Sixth Grades." Unpublished Master's Thesis, Colorado State College of Education, 1939, (M.A.).

Glenn, Mabelle. "Organization of the Junior High School Vocal Program." In Yearbook of the Music Educators National Conference, Volume Thirty, 1939-1940. Chicago: Music Educ. Nat. Conf., 1940, pp. 371-373.

_____. "Singing in Elementary Schools and Junior High Schools." In Yearbook of the Music Supervisors National Conference, 1933, pp. 100-103.

Glenn, Neal E. "The Development and Organization of Materials and Methods for Student Teachers of Instrumental Music." Unpublished Doctoral Dissertation, Northwestern University, 1948, (Ph.D.).

_____. "Human Relations and Music Supervision." Educ., 74 (1954), 18-19.

Glosser, Mort M. "A Critical Analysis of Public School Instrumental Music from the Experimentalist's Viewpoint." Unpublished Doctoral Dissertation, Michigan State College, 1954, (Ed.D.). (Univ. Micro. No. A54-1230; D.A. Vol. 14, p. 841).

Goldman, Irwin J. "The Willingness of Music and Visual Art Students to Admit to Socially Undesirable and Psychopathological Characteristics." Unpublished Doctoral Dissertation, Columbia University, 1962, (Ph.D.). (Univ. Micro. No. 62-2864; D.A. Vol. 23, p. 732).

Goldman, R. F. Julliard Report on Teaching the Literature and Materials of Music. New York: W. W. Norton, 1954.

Goldstein, Hyman. "Will Your Students Succeed in Music?" Etude, 68:10, (1950), 16-17.

Goodhart, Luther W. "The Criteria Governing the Choice of Materials for Senior High School Choruses." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1936. Chicago: Music Educ. Nat. Conf., 1936, pp. 218-220.

Gordon, Edgar B. "A Program of Music Activities Outside the School." In Guy M. Whipple (Ed.), Yearbook of the National Society for the Study of Education, Part II. Chicago: The Society, 1934, p. 176.

_____. "Teaching Music to School and Community By Radio." Junior-Senior High School Clearing House, 7 (October, 1932), 72-74.

Gordon, Philip. "The Availability of Contemporary American Music in High Schools and Colleges." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1949, (Ph.D.).

Gorton, W. S. "Demountable Soundproof Rooms." J. Acoust. Soc. Amer., 17 (1746), 236-239.

Gotshalk, D. W. "Aesthetic Expression." J. Aesthet. Art. Crit., 13 (1954), 80-85.

"Graduate Study in Music Education -- A Report of the Committee on Graduate Study in Music Education." Jour. Res. Music Edu., 2, Fall, 1954, 157-170.

Graeffe, A. D. Creative Education in the Humanities. New York: Harper & Bros., 1951.

Graham, Percy. "The Function of Rote Singing and Music Reading in the Elementary Grades." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1936. Chicago: Music Educ. Nat. Conf., 1936, 141-146.

Grandprey, Medora B. "The Determination of the Musical Capacities of Young Children." Music Supervisors J., 18 (October, 1931), 36.

_____. and Thomas F. Vance. "Musical Capacities of Children." J. Home Economics, 22 (1930), 987-89.

Grant, Ruth. "The Relation of Bodily Rhythm to Instrumental Music." In Yearbook of the Music Educators National Conference, Volume Thirty, 1939-1940. Chicago: Music Educ. Nat. Conf., 1940, pp. 235-236.

Graves, Winifred Sibley. "Factors Associated with Children's Taking Music Lessons, Including Some Parent-Child Relationships: I. History and Procedures." J. of Genet. Psychol., and Pedagogical Seminary, 70 (1947), 65-89.

"Great Emphasis Upon Group Participation and So Little on the Individual Concept." Music J., 8 (November, 1950), 3.

Green, Charles M. "An Evaluation of Preference in Musical Reproduction." Unpublished Master's Thesis, Illinois State Normal University, 1954, (M.S.).

Green, Elizabeth A. H. "Trends in Instrumental Music Teaching." Music Educ. J., 24 (September, 1937), 35.

Green, John E. "School Music Services in State Departments of Education with Implications for California." Unpublished Doctoral Dissertation, University of Southern California, 1959, (Ed.D.). (Univ. Micro. No. 59-2937; D.A. Vol. 20, p. 1226).

Greene, M. M. "Scientific Invitation to Music; Reporting a Four-year Experience in Correlation." Music Educ. J., 32 (April, 1946), 25.

Greene, Theodore M. "The Problem of Meaning in Music and the Other Arts." J. Aesthet., 5:4 (1947), 308-313.

Gregory, Leslie R. "Music Building for Future Teachers." Nation's Schools, 36 (August, 1945), 36-37.

Griffiths, Ruth. "A Job Analysis of Selected Music Supervisors in Eleven Eastern States." Unpublished Doctoral Dissertation, Boston University, 1953, (Ed.D.).

Grisier, Donald W. "The Application of Certain Principles of Learning Derived from Field Theory to the Teaching of Violin Classes in the Junior High School." Unpublished Project Report, Teachers College, Columbia University, 1952, (Ed.D.).

Grover, Paul B. "The History of String Class Instruction in American Schools and Its Relationship to School Orchestras." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ed.D.). (Univ. Micro. No. 60-3924; D.A. Vol. 21, p. 1585).

Gustafson, John M. "A Study Relating to the Boy's Changing Voice: Its Incidence, Training and Function in Choral Music." Unpublished Doctoral Dissertation, The Florida State University, 1956, (Ph.D.). (Univ. Micro. No. 56-2673; D.A. Vol. 16, p. 1696).

Gustin, Molly Malcolmson. "Tonality." Unpublished Doctoral Dissertation, Indiana University, 1961, (Ph.D.). (Univ. Micro. No. 60-6953; D.A. Vol. 22, p. 281).

Haddon, Joe L. "Organization and Administration of Music Education in the Midland Public Schools." Unpublished Project Report, Teachers College, Columbia University, 1959, (Ed.D.).

Haderer, Walter L. "Volume I: Selected Unpublished Symphonies of the Mannheim School for Use in Training School Orchestras. Volume II: Musical Scores." Unpublished Doctoral Dissertation, University of Southern California, 1960, (D.M.A.). (Univ. Micro. No. 60-6204; D.A. Vol. 21, p. 3479).

Hagen, Lawrence M. "A Survey of Choral Music Grading Practices in High Schools of Five Hundred Students or More in the State of Washington." Unpublished Master's Thesis, Montana State University, 1962, (M.M.E.).

Hale, Noel. "Current Trends of Music in Education." Music Opinion, 74 (May, 1951), 403.

Hale, William H., Jr. "A Study of Conflicting Concepts in Secondary Education as Viewed by Principals, Superintendents, Teachers, School Board Chairmen, and Professors of Education in the Eleven States of the Southern Association of Colleges and Secondary Schools." Unpublished Doctoral Dissertation, The Florida State University, 1960, (Ed.D.). (Univ. Micro. No. 60-3308; D.A. Vol. 21, p. 2533).

Hall, J. C. "The Effect of Background Music on the Reading Comprehension of 278 Eighth and Ninth Grade Students." J. Educ. Res., 45 (1952), 451-458.

Hall, Jody (Joseph) C. "A Radiographic, Spectrographic and Photographic Study of the Non Labial Physical Changes Which Occur in the Transition from Middle to Low and Middle to High Registers During Trumpet Performance." Unpublished Doctoral Dissertation, Indiana University, 1954, (Ph.D.). (Univ. Micro. No. 10-146; D.A. Vol. 14, p. 2086).

Hall, Lucy Ducan. "The Value of Eurythmics in Education." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 150-153.

Halsey, Sydney A. "Lodi, California, Union High School Builds for Music." School Musician, 10:8 (April, 1939), 20-22.

Hamel, Paul E. "An Instrumental Music Education Curriculum for Seventh-Day Adventist Colleges." Unpublished Doctoral Dissertation, Chicago Musical College, 1955, (Ph.D.).

Hamm, George A. "Classified Festival Performed Repertoire for SATB, SS, TTBB." Unpublished Master's Thesis, Arizona State College, 1961, (M.A.).

Hanley, Lawrence A. "Some Factors of Scale Usage and Interval Adjustment Affecting Ensemble Intonation Practices in Music Education." Unpublished Doctoral Dissertation, University of Colorado, 1951, (Ed.D.).

Hansen, Louis A. "A Study of the Ability of Musicians to Detect Melodic and Harmonic Errors in the Performance of Choral Music While Inspecting the Score." Unpublished Doctoral Dissertation, University of Kansas, 1954, (Ph.D.).

Hansford, Charles H. "An Appraisal of the Group Singing of Sixth Graders, as Taught by Classroom Teachers, in Twenty-Five Elementary Schools in a Midwestern City of 100,000." Unpublished Doctoral Dissertation, University of Missouri, 1962, (Ed.D.). (Univ. Micro. No. 62-6430; D.A. Vol. 23, p. 2435).

Hanshumaker, James R. "Foundations for the Development of a High School Course in Music Literature Based on the Principles of General Education, with Implications for Teacher Education." Unpublished Doctoral Dissertation, The Ohio State University, 1961, (Ph.D.). (Univ. Micro. No. 62-776; D.A. Vol. 22, p. 3691).

Hanson, E. L. "Fine Arts in the High Schools." School Music, 33 (February, 1962), 28.

Hanson, Howard. "Music Invades the Public School Curriculum." Official Report, 1936, Washington, D.C.: Dept. of Superintendence, Nat. Educ. Ass., 1936, pp. 205-13.

Happold, F. C. "Examination in Music: Experiment at "O" Level." The Music Teacher and Piano Student, 31 (March, 1952), 140.

Hardt, Victor H. "A Critical Analysis of Music for the High School Brass Ensemble." Unpublished Project Report, Teachers College, Columbia University, 1954, (Ed.D.).

Hardwick, Jane L. "Musical Preferences of 311 Sixth, Ninth, and Twelfth-Grade Students." Unpublished Master's Thesis, University of Texas, 1957, (M.M.).

Hare, Robert Y. "The Pedagogical Principles of Music Appreciation." Unpublished Doctoral Dissertation, State University of Iowa, 1959, (Ph.D.). (Univ. Micro. No. 59-1682; D.A. Vol. 19, p. 3320).

Hargraves, Robert. "The Teaching of Brass Instruments in School Music Supervisors' Courses." Unpublished Doctoral Dissertation, Eastman School of Music, 1941, (Ph.D.).

Harlan, H. Grady. "Music in the Schools." Curriculum ., 13 (May, 1942), 218-20.

Harms, Ernest. "The Guidance of the Superior Child and the Prodigy." In E. Harms Handbook of Child Guidance, New York: Child Care Pub., 1947, pp. 112-132.

Harper, Cyrus P. "The Early Development of Instrumental Music in Selected Public High Schools of Seven North Central States." Unpublished Doctoral Dissertation, Northwestern University, 1953, (Ph.D.). (Univ. Micro. No. 7038; D.A. Vol. 14, p. 370).

Harper, James C. "Build for Bands." Nation's Schools, 23 (April, 1939), 64-68.

_____. "New Music Home a Reality." School Activities, 9 (February, 1938), 256-258.

Harris, J. D. "Pitch Discrimination." J. Acous. Soc. Amer., 24 (1952), 750-755.

Harrison, Margaret. "The Teachers College Experiment." In Education of the Air, First Yearbook, Institute for Education by Radio, Columbus: Ohio State University Press, 1930, 213-17.

Harrison, Margaret. "Testing the Appreciation Hour in Rural Schools." Music Supervisors J., 18 (December, 1931), 37.

Harrison, Peggy R. "An Experimental Study by X-Ray Analysis of Some Resonator Adjustments in Efficient and Inefficient Voice Production in Low-Pitched Male Voices." Unpublished Doctoral Dissertation, University of Southern California, 1957, (Ph.D.). (U.S.C. Micro. No. 497-E).

Hart, C. "The Advancement of Opera Through Education." Music of the West, 5 (April, 1950), 5:5 (May, 1950), 6-7.

Hart, Lawrence E. "An Approach to a Practical Pedagogy of Piano Sight-Reading." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1958, (D.M.A.).

Harter, Virginia. "Let's Carry More Than a Tune: Music in Preservice Elementary Teacher Education." Unpublished Project Report, Teachers College, Columbia University, 1953. (Ed.D.).

Hartley, Becky L. "Trends Toward General Music in the Junior High School." Unpublished Master's Thesis, Ohio University, 1963, (M.E.).

Hartman, James B. "A Gestalt Theory of Musical Perception." Unpublished Doctoral Dissertation, Northwestern University, 1959, (Ph.D.). (Univ. Micro. No. 59-4803; D.A. Vol. 20, p. 2332).

Hartshorn, William C. "Listening...A Basic Part of Music Education." Nat. Elementary Principal, 39:3 (December, 1959), 33-36.

Hartzell, Ralph E. "The Musical Activities of 892 Ninth-Grade Pupils." Unpublished Master's Thesis, University of Cincinnati, 1938, (M.E.).

Haskell, D. H. "The String Situation in 1951." Educ. Music Magazine, 31 (November-December, 1951), 37.

Hassard, Robert V. "Sixteenth Century Vocal Music; Its Utilization in Junior and Senior High School." Unpublished Master's Thesis, Douglass College of Rutgers State University, 1959, (M.Ed.).

Hattwick, M. S. "Are We Giving the Child a Chance Musically?" Proc. Ia. Acad. Sci., 40 (1933), 197-198.

_____. "The Measurement of Musical Development: III. A Preliminary Study of Pitch Inflection in Speech of Preschool Children." Univ. Iowa Studies in Child Welfare, 7:1 (1932), 175-186.

Haydon, Chester. "A Critical Analysis of Special Techniques Used in Teaching A Capella Singing in Secondary Schools in Education." Unpublished Master's Thesis, University Southern California, 1939, (M.S.).

Hayes, Ernest. "A Study of the Problems of Space Allocation in New High School Buildings to Meet the Needs of the Various Departments." Unpublished Doctoral Dissertation, University of Washington, 1954, (Ed.D.). (Univ. Micro. No. 10-766; D.A. Vol. 15, p. 366).

Haywood, Frederick H. "The Problems of Voice Classification." Educ. Music Magazine, 16 (January, 1937), 17.

Heath, Robert G. "A Comparative Study of the Musical Talent of Vocal and Instrumental Groups in the Public High Schools of Sioux City, Iowa." Unpublished Master's Thesis, University of South Dakota, 1951, (M.M.).

Heffernan, Helen. "Education Through Music." Education, 74 (September, 1953), 11-16.

Heffernan, Helen. "Music Education in Rural Schools of California." In Yearbook of the Music Educators National Conference, 1939-1940. Chicago: The Conference, 1941, pp. 210-212.

_____. and Ralph Matesky. "Organization and Supervision of Music Education in Elementary Schools of California Cities." Calif. J. of Elem. Ed., 24 (May, 1956), 197-203.

Heitschmidt. Viola. "Comparison of Two Methods of Teaching Vocal Ensemble Music." Unpublished Master's Thesis, University of Kansas, 1941, (M.M.E.).

Heller, Jack J. "The Effects of Formal Music Training on the Wing Musical Intelligence Scores." Unpublished Doctoral Dissertation, State University of Iowa, 1962, (Ph.D.). (Univ. Micro. No. 63-927; D.A. Vol. 23, p. 2936).

Helvey, Kenneth W. "A Study of the Methods of Choral Tone Production of Selected Choral Directors." Unpublished Dissertation, University of Southern California, 1952, (M.M.).

Hemmle, Gene. "The Humanizing Influence of Choral Music." Education, 76 (March, 1956), 427-430.

Henkin, Robert I. "The Prediction of Behavioral Response Patterns to Music." Unpublished Doctoral Dissertation, University of California at Los Angeles, 1955, (Ph.D.).

Henry, Leonard V. "Principles for the Preparation of Secondary School Music Teachers." Unpublished Doctoral Dissertation, The University of Nebraska Teachers College, 1962, (Ed.D.). (Univ. Micro. No. 63-2642; D.A. Vol. 23, p. 3798).

Henzie, Charles A. "Amplitude and Duration Characteristics of Snare Drum Tones." Unpublished Doctoral Dissertation, Indiana University, 1960, (Ed.D.). (Univ. Micro. No. 60-3001; Vol. 21, p. 640).

Hermann, Edward J. "Class Piano as a Function of an In-Service Music Program in Shreveport, Louisiana." Unpublished Project Report, Teachers College, Columbia University, 1953, (Ed.D.).

Hermann, Evelyn L. "A Comparison Study of the Sight-Reading Ability of Students Taught by the Music Specialist and of Students Taught by the General Teacher in a Self-Contained Classroom." Unpublished Doctoral Dissertation, University of Oregon, 1962, (Ed.D.). (Univ. Micro. No. 62-4950; D.A. Vol. 23, p. 1731).

Hertz, Wayne S. "The Relationship Between the Teaching Success of First-Year Elementary Teachers and Their Undergraduate Academic Preparation." Unpublished Doctoral Dissertation, New York University, 1959. (D.A. Vol. 20, p. 4042).

Hesser, Ernest G. "Character Education Through Music." Relig. Educ., 44 (1949), 279-281.

_____. "The Place of the Small Ensemble in the General Music Program." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 222-224.

_____. "Singing in Our Public Schools." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 205-210.

Hester, Harriet. "Music in Rural Education." In Yearbook of the Music Educators National Conference, 1937. Chicago: The Conference, 1938, pp. 249-251.

Hevner, Kate. "Appreciation of Music and Tests for the Appreciation of Music." Studies in Appreciation of Art, University of Oregon, 4:6 (February, 1934), 83-151.

Hevner, Kate. "Measurement of the Ability to Appreciate Music." Psychol. Bull., 28 (1931), 235-36.

Hicks, Luzelle. "The Relationship of the Choral Director and the Community in the Panhandle of Texas." Unpublished Master's Thesis, West Texas State University, 1953, (M.A.).

Higgins, Thomas J. "Making Room for Music." Nation's Schools, 42 (November, 1948), 39-40.

Hill, F. W. "Observations on College String Teaching." Amer. Music Teacher, 2 (January-February, 1953), 9.

Hilliker, La Rue. "Musical Preferences and Interpretations of Selected High School Students." Unpublished Master's Thesis, University of Southern California, 1951, (M.M.).

Hilton, Charles W. "Criteria for a Program of Music Education in the Elementary and Secondary Schools." Unpublished Doctoral Dissertation, Louisiana State University, 1954, (Ph.D.).

Hilton, Viola Oline. "The Problem of Teenage Dropout in Private Piano Study." Unpublished Master's Thesis, The Ohio State University, 1960, (M.A.).

Hilyard, Imogene L. "How Music Contributes to the Elementary Curriculum." Unpublished Master's Thesis, The Ohio State University, 1954, (M.A.).

Hinds, B. Wayne. "Improvement of Vocal Qualities and Musicianship in the High School Choir." Unpublished Master's Thesis, West Texas State University, 1956, (M.A.).

Hinga, Howard. "The Post-war Development of Elementary School Music in a Post-war World." Education, 64 (November, 1943), 159-161.

Hinkelmann, Edward, et al. "Federal Music Project Consolidates Gains." Musical Amer., 60:3 (February 10, 1940), 195.

Hinton, William G., Jr. "Vocal Competencies Desirable for Public School Music Teaching and Their Relation to Class Voice Instruction in Teacher Education." Unpublished Doctoral Dissertation, The Ohio State University, 1960, (Ph.D.). (Univ. Micro. No. 60-6373; D.A. Vol. 21, p. 2318).

Hintz, Elmer M. "Selecting Voices for the Special Chorus." In Yearbook of the Music Educators National Conference, 1937. Chicago: The Conference, 1937, pp. 290-291.

Hissem, Irene. "A New Approach to Music for Young Children." Child Develpr , 4 (1933), 308-317.

Hix, Donald W. "Certain Aspects of Motivation as They Relate to Music Education." Unpublished Master's Thesis, Ohio State University, 1961, (M.A.).

Hjelmervik, Kenneth S. "Organizing and Developing General Music Classes in Selected High Schools of Washington and Oregon." Unpublished Project Report, Teachers College, Columbia University, 1947, (Ed.D.).

Hlavac, Rene E. "Characteristics of Teachers' College Graduates and of Teachers Employed in Secondary School in 1959-1960 in Relation to Career Status in 1960-1961." Unpublished Doctoral Dissertation, University of Nebraska, 1962, (Ed.D.). (Univ. Micro. No. 62-5567; D.A. Vol. 23, p. 1969).

Hoffer, Charles R. "Some Facts About Educational Concerts." Educ. Music Magazine, 36 (March, 1957), 14.

Hoffer, Charles R. "A Study of the Common Efforts of the Community Orchestra and the Public School Music Program in Providing Listening Experiences for School Students." Unpublished Doctoral Dissertation, Michigan State University, 1955, (Ph.D.).

Hoffman, Arnold E. "What Does State Music Supervision Mean?" Education, 76:7 (March, 1956), 436-439.

Hoffren, James A. "The Construction and Validation of a Test of Expressive Phrasing in Music." Unpublished Doctoral Dissertation, University of Illinois, 1962, (Ed.D.). (Univ. Micro. No. 62-6159; D.A. Vol. 23, p. 2546).

Hoggard, Lara. "Teaching Music Reading in the Choral Rehearsal." Unpublished Project Report, Teachers College, Columbia University, 1947, (Ed.D.).

Hohn, Robert W. "A Study of the Relationship Between Vowel Modification and Changes in Pitch in the Male Singing Voice: A Spectrographic Analysis, Reinforced by the Judgment of Phonetics Experts." Unpublished Doctoral Dissertation, Indiana University, 1959, (D.M.E.). (Univ. Micro. No. 59-5446; D.A. Vol. 20, p. 3770).

Holcomb, Paul H. "Music in the Secondary Curriculum." Unpublished Master's Thesis, The Ohio State University, 1942, (M.A.).

Holden, Delpha L. "A Survey of Attempts to Solve Vocal Problems in the High School Chorus." Unpublished Master's Thesis, University of Oregon, 1952, (M.S.).

Hollien, Harry F. "A Study of Some Laryngeal Correlates of Vocal Pitch." Unpublished Doctoral Dissertation, State University of Iowa, 1955, (Ph.D.). (Univ. Micro. No. 14-119; D.A. Vol. 15, p. 2324).

Holmberg, Harry E. "Investigation and Evaluation of Audio-Visual Materials Pertaining to the Undergraduate Music Education Curriculum." Unpublished Doctoral Dissertation, The Florida State University, 1953, (Ed.D.). (Univ. Micro. No. 4697; D.A. Vol. 13, p. 241).

Holton, Arthur J. "Music Education in California Colleges." Unpublished Doctoral Dissertation, University of California at Los Angeles, 1961, (Ed.D.).

Hood, Marguerite V. "Music Instruction in the Ungraded School." In Yearbook of The Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 243-248.

_____. "Teacher Training as Part of College Music Study." Bull. Nat. Ass. Schools of Music, (May-June, 1953), 19-20.

Hoover, John G. "Patterns of Financial Practices in Music Education in High Expenditure Public Schools." Unpublished Project Report, Teachers College, Columbia University, 1949, (Ed.D.).

Hopkins, L. T. "Classroom Experimentation in Functional Music." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 298-301.

Horn, Charles T. "A Survey of Vocal Music in the Junior High School Throughout the United States." Unpublished Master's Thesis, Northwestern University, 1942, (M.M.).

House, Robert W. "A Definition of the Qualified Music Teacher." Educ. Music Magazine, 36 (September, 1956), 8.

House, Robert W. "A Proposed Curriculum for Preparing Teachers of Music at Kearney State Teachers College." Unpublished Doctoral Dissertation, University of Illinois, 1954, (Ed.D.). (Univ. Micro. No. 10-493; D.A. Vol. 15, p. 89).

Housewright, Wiley L. "An Investigation and Evaluation of Present Theories and Techniques in the Teaching of Class Voice as Projected in the Writings of Certain American Teachers." Unpublished Doctoral Dissertation, New York University, 1943, (Ed.D).

Howland, Russell, S. "Factual Approach to Intonation." Etude, 65 (May, 1947), 258.

Huber, Violet Goad. "An Analysis of Suitable Material for Junior High School Choirs of the Panhandle." Unpublished Master's Thesis, West Texas State University, 1949, (M.A.).

Huff, John R. "Individual School Band Camps in Ohio." Unpublished Master's Thesis, The Ohio State University, 1961, (M.A.).

Hug, Gerald F. "The Effect of Changes in the Vocal Mechanism on Vocal Tones." Unpublished Master's Thesis, Illinois State Normal University, 1961.

Hughes, Charles W. Chamber Music in American Schools. Vernon, N Y.: Freyburg Printing Co., 1933.

Hughes, J. M. "Fifty-Nine Case Studies on the Effect of Musical Participation on Social Development." Music Educ. J., 41 (February-March, 1955), 58-59.

Huls, Helen Steen. "The National Association of Teachers of Singing: A Dynamic Force in American Music Education." Education, 76:7 (March, 1956), 419-422.

_____. "A Nationwide Survey on High School Music." Bull. Nat. Ass. Teachers of Singing, (May-June, 1953), 19-20.

_____. "Song List: For Adolescent Voices; Beginning Students, No. 1," Unpublished Professional Paper, St. Cloud State College, 1959, (Mimeographed).

Hummel, Lynn Ellis. "The Music Experiences and Attitudes of Rural Children in Northeast Missouri." Unpublished Doctoral Dissertation, University of Missouri, 1950, (Ed.D.). (Univ. Micro. No. 2041; D.A. Vol. 10, p. 107).

Humphreys, Alfred W. "A Follow-up Study of the Graduates of the School of Music of the University of Illinois." Unpublished Doctoral Dissertation, University of Illinois, 1955, (Ed.D.). (Univ. Micro. No. 15-227; D.A. Vol. 16, p. 350).

_____. "Music Courses Designed for the Classroom Teacher." Educ. Forum, 19 (November, 1954), 95-99.

_____. "Orienting the Classroom Teacher in Music." Music Educ. J., 39 (September, 1952), 28-30.

Humphreys, Arthur F. "Emerging Concepts of Music Supervision." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958, (Ed.D.). (Univ. Micro. No. 59-1103; D.A. Vol. 19, p. 2971).

Hutchinson, F. W. "Preparation in Music for the Classroom Teacher." Music Educ. J., 41 (June, 1955), 26.

Hutton, Doris. "A Comparative Study of Two Methods of Teaching Sight Singing in the Fourth Grade." J. Res. Music Educ., 1 (1953), 119-26.

Huxol, Harry R. "Effects of the Revised Admissions Policy for Freshmen on Entering Music Majors of the Class of 1958 at Indiana University." Unpublished Doctoral Dissertation, Indiana University, 1961, (Ed.D.). (Univ. Micro. No. 62-189; D.A. Vol. 22, p. 3489).

Ihrke, Walter R. "Music Literature as a Means of Integration." Music Educ. J., 38 (November, 1952), 22-3.

Imig, Warner L. "A Study of the Choral Technique for the Secondary School Choir, Including a Catalogue of Two Hundred Twenty-five Choral Numbers of Varied Schools of Composition." Unpublished Master's Thesis, University of Colorado, 1942, (M.M.E.).

"Instrumental Music Report." Bull. Nat. Ass. Secondary-School Principals, 36:189, (November, 1952), 45-46.

Isle, Walter W. "The Stanford University Follow-up Inquiry: A Study of Stanford's Teacher Preparation Services." Unpublished Doctoral Dissertation, Stanford University, 1942, (Ed.D.).

Ivory, Paul S. "Band Programs in Minnesota." J. Res. Music Educ., 1 (Spring, 1953), 3-10.

Jacobsen, O. Irving. "An Analytical Study of Eye-movements in Reading Vocal and Instrumental Music." J. Musicology, 3:1 (1941), 1-32; 3:2 (1941), 69-100; 3:3 (1941), 133-164; 3:4 (1941), 197-226.

_____. "Eye-movement Habits in Reading Instrumental and Vocal Music." Psychol. Bull., 39 (1942), 499.

_____. "The Influence of Hearing Defects." Music Supervisors J., 19 (March, 1933), 24-25.

_____. "The Reading of Instrumental Music as Shown by Photographing Eye-Movements During the Reading Process." School Music, 31, (March-April, 1931), 10-11.

_____. "Use of Music in an Educational Program of Mental Hygiene." J. Exp. Educ., 8 (June, 1940), 399-402.

Jaquish, John H. "Music." In J. Albert Blackburn (Ed.), Research Findings Applicable to Teaching in the Secondary Schools., 1950 Yearbook of the New Jersey Secondary School Teachers' Ass., pp. 81-83.

Jarvie, Jean O. "A Study of the Concepts of Unit Planning Together with a Resource Unit for the General Music Class." Unpublished Master's Thesis, Boston University, 1959, (M.M.).

Jeffers, Edmund V. "The Integration of Vocal Class Work with Choral Activities." In Yearbook of the Music Educators National Conference, 1935. Chicago: The Conference, 1935, pp. 298-300.

Jeffrey, Valeta. "Index to Articles of the Yearbooks of the Music Supervisor's National Conference (1910, 1912-1934)." Unpublished Master's Thesis, Northwestern University, 1935, (M.M.).

Jeffrey, W. E. "New Technique for Motivating and Reinforcing Children." Science, 121 (March 11, 1955), 371.

Jenkens, L. W. "How Much Music Should Be Taught in the Average Elementary and Secondary School?" Nation's Schools, 46 (1950), 57.

Jenkins, Thomas J. "The Organization and Administration of Activity Programs of Public Secondary Schools of Pennsylvania." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1956, (Ed.D.). (Univ. Micro. No. 19-966; D.A. Vol. 17, p. 275).

Jensen, Kai. "Needed Research: Music." In Nelson B. Henry (Ed.), Thirty-eighth Yearbook of the National Society for the Study of Education, Part I. Chicago: The Society, 1939, p. 430.

Jentges, James E. "An Experimental Study of Acoustical Efficiency in Classroom Environments." Unpublished Doctoral Dissertation, Stanford University, 1956, (Ed.D.). (Univ. Micro. No. 17-693; D.A. Vol. 16, p. 1823).

Jersild, Arthur T. Training and Growth in the Development of Children: A Study of the Relative Influence of Learning and Maturation: VIII. Vocal Ability. New York: Bureau of Publications, Teachers College, Columbia University, 1932, 49-61.

John, Robert W. "Band Director - Educator or Entertainer." Music Educ. J., 45:6 (June-July, 1959), 50.

_____. "The General Music Dilemma." Music Educ. J., 48:4 (February-March, 1962), 65.

_____. "The General Music Program." Music Educ. J., 47:4 (February-March, 1961), 55.

_____. "Music Education in This Age." Music Educ. J., 43:3 (January, 1957), 11.

_____. "Pure Research in Music Education." Colorado J. Res. Music Educ., (Spring, 1964), 5-6.

_____. "Recollections of David." Educ. Music Magazine, 35 (September-October, 1955), 18.

_____. "Value Judgements in Music Education." North Carolina Music Educ., 11:1 (September, 1961), 10-11.

_____. "We Love Gadgets." Educ. Music Magazine, 36:2 (November-December, 1956), 12-13.

Johnson, Claude E. The Training of Boys Voices. 1935. Boston: O. Ditson Co., 1935.

Johnson, E. Bruce. "Factors Influencing the Motivation of Secondary School Choral Programs." Unpublished Professional Paper, Montana State University, 1950, (M.M.).

Johnson, Eric H. "Construction and Appraisal of Procedures and Materials for Developing Consensus Regarding Extra-Class Activities Programs." Unpublished Doctoral Dissertaion, University of Illinois, 1952, (Ed.D.). (Univ. Micro. No. 4448; D.A. Vol. 13, p. 44).

Johnson, H. Earle. "The Need for Research in the History of American Music." J. Res. Music Educ., 6 (Spring, 1958), 43-61.

Johnson, Harrill D. "The Senior High School Boys' Glee Club: A Study of Its Organization, Maintenance, Vocal Problems and Selections of Music." Unpublished Master's Thesis, University of the Pacific, 1950, (M.M.).

Johnson, Roy J. "Music Education in Texas Higher Institutions, 1840-1947." Unpublished Doctoral Dissertation, University of Texas, 1951, (Ed.D.).

Johnson, Ruth. "Making Music Live in the Elementary School." School Activities, 7 (April, 1936), 8-9.

Johnston, Burt P. "Music-A Must in General Education." Music Educ. J., 37 (June, 1951), 14-5.

Johnstone, J., and E. Katz. "Youth and Popular Music: A Study in the Sociology of Taste." Amer. J. Sociol., 62:6 (1957), 563-568.

Jones, Archie N. "The Basis of the New Curriculum: Research." Educ. Music Magazine, 22 (March, 1943), 25.

_____. "Curricular Trends in Music Education." Music Educ. J., 23 (December, 1936), 14-16.

_____. "The Post-War Development of Post-War Secondary Music Trends." Education, 64 (1943), 162.

Jones, Don. "Small Vocal Ensembles in the Junior High School." Unpublished Paper, Washington University, 1962.

Jones, E. W. "College Courses for Band Directors." Music J., 14 (October, 1956), 21.

Jones, G. Extra-Curricular Activities in Relation to the Curriculum. (Contribution to Education, No. 667). New York: Teachers College, Columbia University, 1935.

Jones, Mary Cover, and Harold E. Jones. "Factors Associated with Prominence in Extra-Curricular Activities at the High School Level." Amer. Psychologist, 4 (1949), 251.

Jones, Vincent. Music Education in the College. Boston: C. C. Birchard and Co., 1949.

_____. "The Relationship Existing Between the Secondary School and College Music Program." Education, 67:3 (1946), 162-168.

Jordalen, Marion I. "Desirable Music Experiences for the Prospective Elementary Teacher." Unpublished Project Report, Teachers College, Columbia University, 1947, (Ed.D.).

Jordan, Marjorie M. "An Evaluation of the Curriculum Content of the High School Vocal Program." Unpublished Professional Paper, University of Idaho, (1953), (M.S.).

Jordan, Wayne N. "Planning Music Facilities for the Secondary Schools." Unpublished Doctoral Dissertation, Stanford University, 1956, (Ed.D.). (Univ. Micro. No. 19-904; D.A. Vol. 17, p. 544).

Julian, W. J. "Improvability of Timbre Discrimination." Unpublished Doctoral Dissertation, Northwestern University, 1954, (Ph.D.). (Univ. Micro. No. 9249; D.A. Vol. 14, p. 1756).

Julliard School of Music. Julliard Report on Teaching the Literature and Materials of Music. New York: Norton, 1953.

Jung, Joseph W. "A Study of the Factors Associated with Music Participation by Secondary School Pupils in the Suburban Areas of Minneapolis and St. Paul." Unpublished Doctoral Dissertation, University of Minnesota, 1954, (Ph.D.). (Univ. Micro. No. 10-030; D.A. Vol. 14, p. 2007).

Kamphoefner, Henry L. "Band Shell for the Small Town High School Band or Orchestra." School Music, 12:10 (June, 1941), 8-10.

_____. "Three Basic Music Shells." Music Educ. J., 29:3 (January, 1943), 24-25.

Kaplan, Arthur M. "An Exploratory Study of Piano Playing Behavior in Two Groups of Children." Unpublished Doctoral Dissertation, Cornell University, 1956, (Ph.D.). (Univ. Micro. No. 20-412; D.A. Vol. 17, p. 1511).

Karel, Leon. "Present Day German Musical Culture." Music Educ. J., 43 (February-March, 1957), 42.

Karel, Leon. "Recommended Requirements for Admission to the College Level Theory Class." Amer. Music Teacher, (September-October, 1954), 2.

_____., and Donald G. Bowling. "Research and Progress in the Allied Arts." Mo. J. Res. Music Educ., 1 (1962), 37.

Katz, Hedi. "Creative Music in the Progressive Education Program for the Exceptional Child." In The Challenge of Progressive Education, Proceedings of the Fourth Conference on Education and the Exceptional Child. Langhorne, Pa.: Child Res. Clinic of the Woods Schools, 1938, pp. 60-67.

Keegan, Arthur J. "A Study of Music in General Education and a Manual for Teaching General Music in the Lower Secondary Grades." Unpublished Doctoral Dissertation, New York University, 1955, (Ed.D.). (Univ. Micro. No. 16-613).

Keene, James. "Better Physical Control in the Elementary String Classes." Amer. String Teacher, 12 (March-April, 1962), 12:12 (May-June, 1962), 17-19.

_____. "Improved Technique Thru Massed Practice." Instrumentalist, 16 (January, 1962), 39-41.

_____. "Your Orchestra's Tone Quality." Instrumentalist, 15 (October, 1960), 77-78.

Keller, Edith M. "Report of the Committee on Rural School Music." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1939, pp. 252-274.

_____. "State Supervision in Music." Education, 72 (September, 1951), 19-22.

Keller, Horace T., Jr. "Personality Measures as Related to Performance Under Auditory Distraction." Unpublished Doctoral Dissertation, Temple University, 1956, (Ed.D.). (Univ. Micro. No. 16-376).

Kelley, D. "Music in Higher Education (training in music of elementary classroom teacher.)" Music J., 20 (September, 1962), 44.

Kelley, Kenneth G. "The Junior High School Chorus." In Yearbook of the Music Educators National Conference, 1934. Chicago: The Conference, 1934, pp. 158-161.

Kelly, D. T. "Study of the Musical Preferences of a Select Group of Adolescents." J. Res. Music Educ., 9:2 (Fall, 1961), 118-24.

Kelsay, William M. "Music Education for the Hopi Indian Reservation Schools." Unpublished Professional Paper, Arizona State College, 1958, (M.A.).

Kendel, John C. "Keyboard Experience--A Foundation for Musical Knowledge and Enjoyment." Music Educ. J., 41 (April-May, 1955), 38.

Kent, Merle O. "Determiners of Musical Preferences of 125 Junior High School Students." Unpublished Master's Thesis, Florida State University, 1951, (M.M.E.).

Kerman, Joseph. "Music: Basic or Frill?" Music Educ. J., 46:5 (April-May, 1960), 43-46.

Kessinger, James W. "American Contemporary Music Available and Performed by Illinois High School Mixed Chorus." Unpublished Master's Thesis, Illinois State Normal University, 1962, (M.S.).

Kessler, Robert F. "Relationship of Private Instrumental Music Instruction to the Performance Ratings of Selected School Bands." Unpublished Master's Thesis, Ohio State University, 1961, (M.A.).

Kestenberg, Leo. "Music Education Goes Its Own Way." Musical Quart., 25:4 (October, 1939), 442-54.

Keston, M. J., and I. M. Pinto. "Possible Factors Influencing Musical Preference." J. of Genet. Psychol., 86 (March, 1955), 101-113.

Kettering, Charles V. "The Recording Procedure in Music Education." Music Educ. J., 22:5 (March, 1936), 29.

Keyes, Frances H. "Teaching Musicianship in Elementary Violin Classes." Unpublished Project Report, Teachers College, Columbia University, 1954, (Ed.D.).

Kidd, E. A. "Experiment in Music Integration." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 308-309.

Kilpatrick, Lula. "Classroom Teachers Can Teach Music!" Nat. Elementary Principal, 39:3 (December, 1959), 11-15.

King, Chauncey B. "College Courses in Music Education." Music Supervisors J., 20 (October, 1933), 25-26; 20 (December, 1933), 22.

King, Ralph R. "Problems of Instrumental Music with Revisions of the Instrumental Music Education Program of Colorado State College of Education." Unpublished Doctoral Dissertation, University of Denver, 1953, (Ed.D.).

Kinney, Millard H. "Basic Knowledge of Music for the Elementary Classroom Teacher." Unpublished Master's Practicum, Arizona State College, 1957, (M.A.).

Kirkpatrick, William Coy, Jr. "Relationships Between the Singing Ability of Pre-kindergarten Children and Their Home Musical Environment." Unpublished Doctoral Dissertation, University of Southern California, 1962, (Ed.D.). (Univ. Micro. No. 62-3736; D.A. Vol. 23, p. 886).

Kjelson, Lee R. "The Development of Two Instructional Films for the Teaching of General Music in the Junior High School." Unpublished Doctoral Dissertation, State University of Iowa, 1957, (Ph.D.). (Univ. Micro. No. 23-759; Vol. 17, p. 3039).

Kluth, Marjorie F. "Changes in Elementary School Song Books." Music Educ. J., 37 (February, 1951), 31-33.

Knapp, Ida C. The Child's Unfoldment Through Music. Cincinnati: The Willis Music Co., 1947.

Knapp, Robert H., Janet Brimmsa, and Marth White. "Educational Level, Class Status, and Aesthetic Preference." J. Soc. Psychol., 50 (1959), 277-284.

Knieter, Gerard L. "Creative Arts Symposium; A Four Year Experiment Team-Teaching Music and the Fine Arts." Music Educ. J. 49 (April, 1963), 62-66.

Knight, Lina Galdauf. "Experimental Studies in Junior High School Monotonism." Unpublished Master's Thesis, Arthur Jordan Conservatory of Music, 1941, (M.M.).

Knighton, David. "An Analysis of Selected Original Compositions by Educational Performance Criteria." Unpublished, University of Nevada, 1962.

Knuth, William E. "Music Education in the Next Decade." Education, 76:7 (March, 1956), 440-442.

Kohut, Heinz, and Siegmund Levarie. "On the Enjoyment of Listening to Music." Psychoanal. Quart., 19 (1950), 64-87.

Konarski, M. M. "A Music Room Plus." Nation's Schools, 36 (August, 1945), 34-35.

Kooistra, Karl. "A Study of the Uniformity of Emotional Reaction to Music by Listeners of Different Age, Sex, and Musical Training." Unpublished Master's Thesis, The Ohio State University, 1940, (M.A.).

Kopp, George W. "The Effects of Stimulating and Relaxing Music on Children Taking a Fourth Grade Arithmetic Test." Unpublished Doctoral Dissertation, Syracuse University 1958, (Ed.D.). (Univ. Micro. No. 58-7225; D.A. Vol. 20, p. 687).

Korte, Ernest W. "Standards for Entrance Requirements to Music Education Departments of Colorado Colleges." Unpublished Master's Thesis, Colorado State College of Education, 1943, (M.A.).

Kortkamp, Ivan A. "Compensating for Flatting." Educ. Music Magazine, 20 (September-October, 1940), 46-49.

Krenek, Ernst. "The Place of Contemporary Music in General Education." Amer. Musicol. Soc. Papers, 3 (1938), 25-29.

Kromminga, Louis U. "Characteristics and Curriculum Evaluations of Bachelor and Master of Music Degree Graduates from the University of Texas (1948-1957)." Unpublished Doctoral Dissertation, The University of Texas, 1959, (Ph.D.). (Univ. Micro. No. 59-2489; D.A. Vol. 20, p. 575).

Krone, M. T. "A New Experiment in Teacher Training in the Arts." Music Educ. J., 36 (April-May, 1950), 54-55.

Krone, Beatrice, and Max Krone. Music Participation in the Elementary School. Park Ridge, Ill.: Neil Kjos Music Co., 1952.

Krone, Max T., and Florence M. Wallace. "High School Students' Interests in Choral Music." Music Educ. J., 21 (October, 1934), 26-28.

Kwalwasser, Jacob. "The Appreciational Arts--Music." The Implications of Research for the Classroom Teacher, Joint Yearbook of the Amer. Educational Research Assoc. and the Dept. of Classroom Teachers, Washington, D. C.: Nat. Educ. Ass., 1939, pp. 254-58.

_____. "Are the Blind Superior to the Seeing in Hearing?" Etude, 50:4 (April, 1932), 249.

_____. "Can Children Teach Us About Teaching Children?" Music Educ. J., 21 (October, 1934), 21.

_____. "Voice Problems in Public Schools." In Yearbook of the Music Supervisors National Conference, 1933. Chicago: The Conference, 1933, pp. 105-110.

_____. "What Can Children Teach Us About Teaching Children?" Music Educ. J., 21 (October, 1934), 21.

LaBach, James P. "The Effects of Background Music on Reading Comprehension and Their Relationship to Various Other Characteristics in Sixth Grade Students." Unpublished Doctoral Dissertation, Syracuse University, 1960, (Ph.D.). (Univ. Micro. No. 60-2607; D.A. Vol. 21, p. 350).

Lemade, M. B. "Teacher-Training in Percussion; An Analysis of the Percussion Instruction Offered by Colleges and Universities." Instrumentalist, 12 (March, 1958), 74.

La Mariana, Angelo. "String Chamber Music for Amateur Performers." Unpublished Project Report, Teachers College, Columbia University, 1954, (Ed.E.).

Lambson, Arthur R. "An Evaluation of Various Seating Plans Used in Choral Singing." J. Res. Music Educ., 9 (Spring, 1961), 47-54.

Lamp, Charles J. "Planning Rooms for Music Departments in Secondary Schools, and Colleges." Amer. School and Univ., 12 (1940), 301-307.

Lane, R. N. "Some Useful Measurements in Room Acoustics." J. Acous. Soc. Amer., 29:1 (1957), 178.

_____, and E. E. Mikeska. "Study of Acoustical Requirements for Teaching Studios and Practice Rooms in Music School Buildings." J. Acoust. Soc. Amer., 27 (November, 1955), 1087-91.

Lang, John. "Musical Values and the String Class." Mo. J. Res. Music Educ., 1:1 (1962), 11-20.

Langdon, Grace. A Study of Similarities and Differences in Teaching in Nursery School, Kindergarten, and First Grade. New York: The John Day Co., 1933.

Langsford, Harry M. "An Experimental Study of the Effect of Practice Upon Improvement in Melodic Dictation." Unpublished Doctoral Dissertation, Michigan State University, 1959, (Ph.D.). (Univ. Micro. No. 60-1715; D.A. Vol. 20, p. 4679).

Lanigan, Mary F. "A Study of the Junior High School Choral Music Program in Massachusetts." Unpublished Master's Thesis, Boston University, 1959, (M.M.).

Lanman, Sonia. "Better Music Teaching." Progressive Educ., 23 (February, 1946), 158-60.

La Prade, Ernest. "The Damrosch Music Hour." Education on the Air, First Yearbook of the Institute for Education by Radio, Columbus: Ohio State Univ. Press, 1930, pp. 218-23.

Larson, Ruth C. "A Brief Report of a Prediction and Guidance Program in School Music." In Yearbook of the Music Educators National Conference, 1934. Chicago: The Conference, 1934, pp. 223-226.

Larson, William S. "Mutual Administrative Problems of the Principal and the Music Supervisor." Education, 67 (November, 1946), 143-8.

_____. "The Place of Research in Music Education." Proceedings of the Music Teachers National Association, 1949. Pittsburgh: The Association, 1951, pp. 183-188.

_____. "Some Recent Trends in Music Education." Education, 56 (May, 1936), 513-520.

Latherow, Robert L. "An Overview of Teaching Vocal Music in Secondary Schools." Unpublished Project Report, Teachers College, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 63-2266; D.A. Vol. 23, p. 4379).

Lauritzen, Adrian R. M. "Some Psychophysical Implications of Rhythm Pedagogy in the Primary Grades." Unpublished Doctoral Dissertation, Chicago Musical College, 1954, (D.M.E.).

Lawler, Vanette. "Extra Curricular Music Activities." Bull. Nat. Ass. Sec. Sch. Principals, 36 (February, 1952), 177-186.

_____. "The International Society for Music Education." Education, 76:7 (March, 1956), 414-418.

Leach, M. W. "Results of Five Years Experimentation with Creative Music in Junior High School." Univ. H. Sch. J., 16 (December, 1937), 110-113.

"Leading Musicians and Teachers Check Their Attitudes for Stanford Test." Music J., 10:7 (October, 1952), 21-37.

Leblanc, G. Co. The Influence of Parents' Attitude on Children's Musical Activity. Kenosha, Wisconsin: G. Leblanc Co., 1961.

Leedy, Clifford E. "The Background Philosophy and Principles of Public School Music Education and Its Supervision." Unpublished Doctoral Dissertation, University of Washington, 1941, (Ph.D.).

Lehman, Paul R. "The Harmonic Structure of the Tone of the Bassoon." Unpublished Doctoral Dissertation, University of Michigan, 1962, (Ph.D.). (Univ. Micro. No. 63-390; D.A. Vol. 23, p. 1733).

Lemert, Harry M. "Music Education in the Public Junior College." Unpublished Doctoral Dissertation, University of Texas, 1953, (Ph.D.).

Leonard, Mary A. "A Comparative Study of the Relative Values of Two Procedures in the Teaching of Class Piano." Unpublished Master's Thesis, The Ohio State University, 1944, (M.A.).

Leonhard, Charles. "Research: Philosophy and Esthetics." J. Res. Music Educ., 3 (Spring, 1955), 23-26.

Lesher, Thomas M. "Anxiety Reduction as a Function of Musically Controlled Projection Rate." Unpublished Doctoral Dissertation, Pennsylvania State University, 1957, (Ph.D.).

Lesinsky, A. P. "New Instrumental Building for Whiting, Indiana." School Musician, 7 (May, 1936), 9.

Lewis, F. H. "Development of Artistic Appreciation." Psychol. Bull., 31 (1934), 679.

Lewis, Kenneth L. "Strengths and Weaknesses of Selected Elementary School Programs in Oklahoma." Unpublished Doctoral Dissertation, The University of Oklahoma, 1958, (Ed.D.). (Univ. Micro. No. 58-593; D.A. Vol. 18, p. 1353).

Lewis, Lew J. "The Violin Family in Music Education." Unpublished Doctoral Dissertation, Stanford University, 1951, (Ed.D.).

Lewis, Russell A. "Music Supervision in Grades One to Six." J. Educ., 137:5 (1955), 19-20.

Lichte, W. H. "One Man's Preferred Fifth." Amer. J. Psychol., 68 (1955), 312-315.

Lidral, Frank W. "A Study in the Pedagogy of Melodic Dictation." Unpublished Doctoral Dissertation, University of Rochester, 1956, (Ph.D.).

Lifton, W. M. "The Role of Empathy and Aesthetics Sensitivity in Counseling." J Counsel. Psychol., 5 (1958), 267-275.

Link, Virginia Lee. "Determining the Desirable Music Experiences that Should be Included in the Training of Elementary Teachers for Texas Schools." Unpublished Doctoral Dissertation, University of Texas, 1954, (Ph.D.).

Linton, Stanley. "Music for the Preservice Classroom Teacher." J. Res. Music Educ., 2 (Spring, 1954), 3-10.

Lippman, Edward A. "Music and Space: A Study in the Philosophy of Music." Unpublished Doctoral Dissertation, Columbia University, 1952, (Ph.D.). (Univ. Micro. No. 4211; D.A. Vol. 12, p. 631).

Lloyd, Llewelyn S. "Intonation - and the Ear." Music and Letters, 19:4 (October, 1938), 443-449.

Long, Leland B. "Attitudes and Interests of Secondary School Instrumentalists." Music Educ. J., 36 (February-March, 1950), 48.

Lonnberg, Evelynne D. "The Influence of Secondary Music Education on Adult Musical Participation." Unpublished Master's Thesis, 1960, The Ohio State University, (M.A.).

Loudon, M. V. "The Required Music Course in the Light of Pupil Ability." Elem. Sch. J., 35 (1934), 103-106.

Lubera, Thaddeus J. "The Place of the General Education in Facilitating on Expanding Music Program." In Music in American Education, Chicago: Music Educ. Nat. Conf., 1955, pp. 13-14.

Luce, John R. "Sight-Reading and Ear-Playing Abilities Related to the Training and Background of Instrumental Music Students." Unpublished Doctoral Dissertation, The University of Nebraska Teachers College, 1958, (Ed.D.). (Univ. Micro. No. 58-5901; D.A. Vol. 19, p. 1629).

Ludlow, Jim H. "Television Program Preferences of Listeners in Utah County, Utah." Unpublished Doctoral Dissertation, The Ohio State University, 1957, (Ph.D.). (Univ. Micro. No. 58-2085; D.A. Vol. 18, p. 2258).

Ludwig, Elizabeth A. "A Critical Evaluation of the Program of Contemporary Secondary Schools in Order to Determine Opportunities They Provide for Leisure-Time Education." Unpublished Doctoral Dissertation, New York University, 1954, (Ph.D.). (Univ. Micro. No. 9316; D.A. Vol. 14, p. 1585).

Lundin, Robert W. "The Development and Validation of a Set of Musical Ability Tests." Amer. Psychologist, 2 (August, 1947), 350.

_____. "Musical Learning and Reinforcement Theory." Music Educ. J., 46 (February-March, 1960), 46-49.

_____. "Toward a Cultural Theory of Consonance." J. Psychol., 23 (January, 1947), 45-49.

Lynn, William A., Jr. "Choral Program Building." Unpublished Master's Thesis, Northwestern University, 1949, (M.M.).

McCain, Ramona C. "A Study of Sex Differences in Music Preference." Unpublished Master's Thesis, Texas Southern University, 1959, (M.M.E.).

McCarthy, Alice V. "Teaching Problems in Junior High School Vocal Music." Unpublished Master's Thesis, State University of Iowa, 1937, (M.A.).

McCluskey, Thorp. "A New Idea for the Small Ensemble." The Musician, 35:8 (August, 1930), 11.

McConathy, Osbourne. "Teaching the Piano by Radio." School Life, 16 (June, 1931), 196-197.

McConathy, Osbourne, et al. Music in Rural Education. New York: Silver Burdett Co., 1933.

McCormick, Arthur. "A Study of Melodic Interval Difficulty in Relation to Senior High Girls' Choir." Unpublished Master's Thesis, University of Texas, 1949, (M.M.).

McDonald, Margaret M. "An Analytical Survey of Choral Literature Performed in Oregon High Schools from 1955-1959." Unpublished Project Report, University of Oregon, 1960, (M.M.E.).

McDonald, Thane E. "The Electronic Organ and Its Use in Secondary Schools and Colleges." Unpublished Project Report, Teachers College, Columbia University, 1956, (Ed.D.).

McDougall, Stanley D. "The Use and Functions of Multi-Purpose Rooms in Santa Clara County, California." Unpublished Doctoral Dissertation, Stanford University, 1957, (Ed.D.). (Univ. Micro. No. 21-561; D.A. Vol. 17, p. 1500).

McEachern, Edna E. A Survey and Evaluation of the Education of School Music Teachers in the United States. (Contributions to Education, No. 101). New York: Bureau of Publication, Columbia University, 1937.

McFarland, F. M. "Federal Music Project in New York City." In Yearbook of the Music Educators National Conference. Chicago: The Conference, 1936, pp. 384-388.

McGuire, David C. "A Study of Causes for Withdrawal of Under-graduate Music Students." Unpublished Doctoral Dissertation, Indiana University, 1959, (D.M. Ed.).

McHugh, Catherine Frances. "Experiences in the Musical Preparation of the Elementary School Teacher at the University of Arkansas." Unpublished Project Report, Teachers College, Columbia University, 1959. (Ed.D.).

McIntire, John. "Music Centered Music Curriculum." Texas Outlook, 26 (October, 1942), 41-42.

McIntyre, Barbara May. "The Effect of a Program of Creative Activities upon the Consonant Articulation Skills of Adolescent and Pre-Adolescent Children with Speech Disorders." Unpublished Doctoral Dissertation, University of Pittsburgh, 1957, (Ph.D.). (Univ. Micro. No. 57-1848; D.A. Vol. 17, p. 1152).

McKee, John P., and Donald A. Riley. "Auditory Transposition in Six-Year-Old Children." Child Developm., 33:2 (1962), 469-476.

McMillan, Luella E. "Children's Musical Experiences in the Elementary School." Unpublished Project Report, Teachers College, Columbia University, 1957, (Ed.D.).

_____. Guiding Children's Growth Through Music. Boston: Ginn and Company, 1959.

McMurray, Foster. "A Pragmatic Approach to Certain Aspects of Music Education." J. Res. Music Educ., 4 (Fall, 1956), 103-112.

McMurry, Glen D. "A Study of Contributing Factors in Effective Use of 16 mm Sound Films in Music Education." Kansas Music Rev., (December, 1948), 11-12.

MacDonald, Margherita et al. "Leisure Activities and the Socio-Economic Status of Children." Amer. J. of Sociology, 54 (1949), 505-519.

Maclary, Charles T. "Tention or Attention." School Music, 35 (November-December, 1935), 9-10.

MacLatchy, J. H. and M. Van Nest. "Activities in the Nursery School, Kindergarten, and Elementary Grades." Rev. Educ. Res., 5 (1935), 4-13.

Mac Lean, I. E. "Experiments with Music in the Integrated Program." In Yearbook of the Music Educators National Conference, 1935. Chicago: The Conference, 1935, pp. 184-191.

MacLean, M. S., and E. Crane. "Program Preferences: Their Implications for the Educational Broadcaster." Audio-vis. Commun. Rev., 9:2 (1961), 85-98.

MacNair, Walter A. "Optimum Reverberation Time for Auditoriums." J. Acoust. Soc. Amer., 1 (1930), 242-248.

MacPherson, P. E. "Adolescent Interest and Public School Music." Arizona Teacher, 28 (May, 1940), 271.

Maddy, Joseph E. "Bandmastering by Radio." School Life, 17 (1931), 8-9.

_____. "Music Rooms and Equipment." In Guy M. Whipple (Ed.), Thirty-fifth Yearbook of the National Society for the Study of Education, Part II. Chicago: The Society, 1936, pp. 167-171.

_____. "Problems of the Orchestra and Band Leader in Small Schools." In Yearbook of the Music Educators National Conference, 1932. Chicago: The Conference, 1932, p. 235.

Madsen, Farrell D. "A Study of the Competencies of Utah Junior High School Music Teachers." Unpublished Doctoral Dissertation, University of Oregon, 1957, (Ed.D.). (Univ. Micro. No. 20-199; D.A. Vol. 19, p. 2545).

Magan, Isabel L. "A Study of the Musical Preference of High School Girls." Unpublished Master's Thesis, University of Chicago, Chicago, 1935, (M.A.).

Magnell, Elmer P. "Value of College Grades in Predicting Success of Music Teachers." Music Educ. J., 41 (November, 1954), 55-56.

Magnuson, Cleone Q. "An Investigation in the Change of Musical Taste Based on Owned Recording Collections." Unpublished Master's Thesis, Northwestern University, 1959, (M.M.).

Malek, Vincent F. "A Study of Embouchure and Trumpet-Cornet Mouthpiece Measurements." Unpublished Doctoral Dissertation, Northwestern University, 1953, (Ph.D.). (Univ. Micro. No. A53-2077; D.A. Vol. 13, p. 1217).

Malone, Marjorie J. "Controlled Experiment in the Musical Taste in the Lunch Room." Sch. Musician, 24 (January, 1953), 8-9.

Maness, Cornelia Faye. "A Study of Musical Likes and Dislikes of Sixth, Seventh, and Eighth Grade Children from Different Economic Levels." Unpublished Master's Thesis, University of Texas, 1951, (M.M.).

Maraffie, Bertha Neubert. "Identification of Critical Elements Associated with the Development of Effective String Programs in Pennsylvania Public Schools." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1961, (Ed.D.). (Univ. Micro. No. 62-2191; D.A. Vol. 22, p. 3952).

Marek, G. "How Some Children are Taught Music." Good Housekeeping, 115 (September, 1942), 8.

_____. "A Report on Music Education in Schools." Good Housekeeping, 131 (September, 1950), 4.

Marill, Gertrude, and Helen K. Mull. "A Further Study of Preferred Regions in Musical Compositions and the Effect of Repetition Upon Them." Amer. J. Psychol. 55 (January, 1942), 110-11.

Marple, Hugo Dixon 1920. "Contemporary Philosophies of Music Education." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1949, (Ph.D.).

Marquis, James H. "A Study of Interval Problems in Sight-Singing Performance with Consideration of the Effect of Context." Unpublished Doctoral Dissertation, State University of Iowa, 1963, (Ph.D.). (Univ. Micro. No. 63-4748; D.A. Vol. 23, p. 767).

Marshall, Harvey. "Techniques for Teaching High School a Cappella Choir: A Study of Six Groups Rated by Ten Judges from Recordings Made Under Controlled Conditions After Ten Weeks of Classroom Observation with Conclusions Affecting Teaching Procedure." Unpublished Doctoral Dissertation, Stanford University, 1950, (Ed.D.).

Martenot, M. "Martenot Method: Fundamental Principles of a Music Education Inspired by New Educational Methods." In Music in Education. Paris: UNESCO, 1955, pp. 232-241.

Martin, Francis F. "Toward a Psychoacoustic Approach to Music Appreciation." Music Educ. J., 48 (January, 1962), 61-64.

Marvel, Lorene. "An Exploration of the Working Relationships Between the Classroom Teacher and Music Consultant in the Elementary School." Unpublished Project Report, Teachers College, Columbia University, 1958, (Ed.D.).

_____. The Music Consultant at Work. New York: Bureau of Pub., Teachers College, Columbia Univ., 1960.

_____. "Results of a Survey of Graduate Bulletins as to Music Offerings." Unpublished Professional Paper, St. Cloud State College, 1961, (Mimeographed).

Mason, Chester W. "Comparison of Elementary and Junior High School Classroom Music." Unpublished Doctoral Dissertation, Stanford University, 1953, (Ed.D.). (Univ. Micro. No. 5771; D.A. Vol. 13, p. 735).

Mason, Lela S. "Song-Making by the Non-Singers." Music Educ. J., 31 (November-December, 1944), 28.

Masserman, Jules H. "Music and the Child in Society." Amer. J. Psychother., 8 (January, 1954), 63-87.

Masson, L. T. "A Suggested Course of Study in Music for High School." Peabody Bull., 31:1 (1934), 32-37.

Mathews, Sarah F. "A Study Treating the Application of Creative Teaching in Eighth Grade General Music Classes." Unpublished Master's Thesis, Southwest Texas State Teachers College, 1952, (M.A.).

Mathis, George R. "A Study of Music Teacher Preparation at Illinois Wesleyan University." Unpublished Doctoral Dissertation, University of Illinois, 1962, (Ed.D.). (Univ. Micro. No. 62-6187; D.A. Vol. 23, p. 2936).

Mathis, William S. "Thirty-six Selected Choral Works of the Sixteenth Century adapted and Annotated for Performance by Non-professional Choral Groups." Unpublished Doctoral Dissertation, Florida State University, 1952, (Ph.D.). (Univ. Micro. No. 4295; D.A. Vol. 12, p. 632).

Maxfield, J. P., and C. C. Potwin. "Acoustical Planning for Modern Schools." Amer. School and Univ., 12 (1940), 43-50.

Maxwell, Ezra H. "A Study of the Effectiveness of an Intergroup Education Program in Choral Music Classes." Unpublished Master's Thesis, San Diego State College, 1952, (M.A.).

May, Elizabeth, and Mantle Hood. "Japanese Music for American Children." Music Educ. J., 48 (April-May, 1962), 38.

Mayeske, George W. "Some Associations of Musical Preference Dimensions of Personality." Unpublished Doctoral Dissertation, University of Illinois, 1962, (Ph.D.). (Univ. Micro. No. 62-6188; D.A. Vol. 23, p. 3468).

Meyer, D. E. "Instrumental Music in the Elementary Schools (Survey of Elementary Schools in Indiana)" Instrumentalist, 5 (March-April, 1951), 60-62.

Michel, A. "Bibliography of Psychoanalysis of Music and Musicians." Samiksa, 8 (1954), 222-234.

Michigan Council of State College Presidents. "Musical Development of the Classroom Teachers." Music Educ. Res. Council Bull., No. 5. Chicago: Music Educ. Nat. Council., 1951.

Miessner, W. Otto. "Music Appreciation for Everybody." See and Hear, 6:4 (1951), 14-15.

Miles, James B. "An Analysis of Relationships Between Experiences in Correlated Courses in Art, Music, and Modern Dance, and Certain Behavioral Changes Related to Aesthetic Experience." Unpublished Doctoral Dissertation, North Texas State University, 1962, (Ed.D.). (Univ. Micro. No. 63-1415; D.A. Vol. 23, p. 3309).

Miller, Charles H. "Teaching Sight-Reading Without Syllables." Music Supervisors J., 17 (October, 1930), 18-19.

Miller, Robert W. "An Experimental Study of the Evaluations by Untrained Listeners of Efficient and Inefficient Voice Production As to Quality." Unpublished Doctoral Dissertation, University of Southern California, 1957, (Ph.D.).

Miller, Sister Mary Janet, S.C. "The Role of Music in the General Secondary School Curriculum." In Richard E. Werder (Ed.), Music Education in the Secondary School. Washington, D.C.: The Catholic University of America Press, 1955, p. 42.

Mitchell, J. O. "We Like to Face the Music." Junior Arts and Activities, 36:4 (December, 1954), 36-37.

Mix, Robert D. "An Analysis of Compositions for Mixed Chorus as Selected by Directors in Minnesota for Use in Festivals for Adjudication." Unpublished Master's Thesis, Montana State University, 1958, (M.M.E.).

Moffitt, R. Easton. "A Study of Intonation Tendencies of Certain Instruments Playing at Different Dynamic Levels." Unpublished Master's Thesis, Brigham Young University, 1949, (M.A.).

Mohr, Harold E. "The High School and Adult Music Program of Van Wert and Paulding Counties." Unpublished Master's Thesis, The Ohio State University, 1937, (M.A.).

Mohr, L. C. "Let Us Have Music." Nation's Schools, 20 (November, 1937), 50-51.

Molnar, J. W. "Self-evaluation by Students." Music Educ. J., 34:4 (1948), 48-52.

Monroe, Samuel F. "The Present Status of Music in the State Teachers Colleges and Normal Schools of the New England and Middle Atlantic States with an Interpretation." Unpublished Doctoral Dissertation, New York University, 1944, (Ed.D.).

Moore, Donald I. "Forward with Bandsmen." S. W. Musician, 17 (June, 1951), 6.

Moore, E. C. "Building Bands and Orchestras in Our Schools." In Yearbook of the Music Supervisors Nat. Conference, 1931. Chicago: The Conference, 1931, pp. 182-183.

Moore, Milton W. "The Function and Responsibilities of a State Music Supervisor for South Carolina." Unpublished Project Report, Teachers College, Columbia University, 1956, (Ed.D.).

Moore, Paul B. "The Instrumental Teacher-Training Program in Teachers Colleges." Unpublished Master's Thesis, Colorado State College of Education, 1947, (M.A.).

Moore, Thomas J. "The Earned Doctorate in Music as a Factor in Appointments in Music Administration." Unpublished Doctoral Dissertation, Chicago Musical College, 1954, (D.M.Ed.).

Morehead, G. E., and D. Pond. "Music of Young Children. I. Chant; II. General Observations." Pillsbury Found. Stud., (May, 1941), 23.

Morey, R. "Upset in Emotions." J. Soc. Psychol., 12 (1940), 333-356.

Morgan, Barbara J., and Ogden R. Lindsley. "Operant Preference for Stereophonic over Monophonic Music." Unpublished Ms., Boston: Behavior Research Co., 1962.

Morgan, Haydn M. "Vocal Work in the Junior High School." In Yearbook of the Music Educators National Conference, 1937. Chicago: The Conference, 1938, pp. 263-265.

Morgan, Hazel B. "Improvement of Elementary School Music Teaching." Education, 76:7 (March, 1956), 423-426.

Morgan, Paul C. "Promising Practices in Scheduling Cocurricular Activities in Secondary Schools." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1956, (Ed.D.). (Univ. Micro. No. 57-870; D.A. Vol. 17, p. 547).

Morgan, Russle V. "New Phases of Music Education in the Elementary School." In Paul J. Weaver (Ed.), The Journal of Proceedings of the Music Supervisors National Conference, 1930. Ithaca, N.Y.: The Conference, 1930, pp. 127-130.

Morris, M. R. "Music Clinics for Elementary Teachers." Music Educ. J., 33 (January, 1947), 16-17.

Morrison, Linda Larkin. "A Study of the Attitudes, Likes, and Dislikes of High School Students Toward Music." Unpublished Master's Thesis, University of Texas, 1960, (M.M.).

Morton, Leonard H. "An Investigation of Existing Practices of A Cappella Choirs of Ten Selected Secondary Schools of Nashville, Tennessee, and a Resource Unit for Choral Instruction." Unpublished Master's Thesis, Tennessee Agricultural and Industrial University, 1960.

Mowe, H. G. "Voice Production Standards at High Schools and Colleges." Nat. Music Council Bull., 11 (January, 1951), 5-6.

Mueller, John H. "Music and Education: A Sociological Approach." In Nelson B. Henry (Ed.), Basic Concepts in Music Education. Fifty-seventh Yearbook of the Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1958, pp. 88-122.

Mull, Helen K. "The Effect of Repetition on the Enjoyment of Modern Music." J. Psychol., 43 (1957), 155-162.

_____. "Preferred Regions in Musical Compositions and the Effect of Repetition Upon Them." Amer. J. Psychol., 53 (1940), 583-586.

Mullens, Lyle L. "Evaluation of Pre-Service Ratings as Predictors of Teacher Success." Unpublished Doctoral Dissertation, University of Nebraska, 1960, (Ed.D.). (Univ. Micro. No. 60-5567; D.A. Vol. 21, p. 2178).

Muller, J. F. "Trends in Music Education Performance and Perfection." School Music, 21 (February, 1950), 15-16.

Mumaw, Otis J. "Teacher Education in Music." Unpublished Doctoral Dissertation, Northwestern University, 1950, (Ph.D.).

Mursell, James L. "A Balanced Curriculum in Music Education." Education, 56 (May, 1936), 521-26.

_____. "The Claims of Music in the School Curriculum." Yearbook of the Music Educators National Conference, 1935. Chicago: The Conference, 1935, pp. 21-26.

_____. "A Tentative Growth Gradient in Music." Music Educ. J., 34:2 (November-December), 1947, 18-19.

_____. "How Children Learn Aesthetic Responses." In Nelson B. Henry (Ed.), Forty-ninth Yearbook of the National Society for the Study of Education, Part I. Chicago: The Society, 1950, pp. 183-191.

_____. "The Place of Music in the Curriculum and in Life." The Viewpoint of the Psychologist. Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 39-42.

_____. "Reading Music." In Guy M. Whipple (Ed.), Thirty-fifth Yearbook of the National Society for the Study of Education. Chicago: The Society, 1936.

_____. "What about Music Tests?" Music Educ. J., 24 (October, 1937), 16-18.

_____., and Bjornar Bergethon. "Curriculum for the Education of Music Teachers." Music in Amer. Educ., Source Book No. 2., Chicago: Music Educ. Nat. Conf., 1955, pp. 137-146.

_____. "Teachers College Curriculum." Music Educators National Conference Committee Reports. Chicago: Music Educ. Nat. Conf., 1945.

_____., and T. Madison. "Psychology and Methods in the High School and College: Music." Rev. Educ. Res., 8 (1938), 58-59.

_____., et al. "Measurement of Understanding in the Fine Arts." In Nelson B. Henry (Ed.), Forty-fifth Yearbook of the National Society for the Study of Education, Part I. Chicago: The Society, 1946, pp. 201-212.

"Music Education." In Forward to the Fundamentals of Education: The Hartford Schools in 1936-1937. New York: Bureau of Publications, Teachers Coll., Columbia Univ., 1937, 262-275.

"Music Education in Secondary Schools." Music Educ. J., 31 (May, 1945), 26-27.

Music Educators National Conference. "Course of Study in Music for Rural Schools." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 183-198.

Music Educators National Conference. Keyboard Experience and Piano Class Instruction. Washington: Music Educ. Nat. Conf., 1957.

Music Educators National Conference. Music in Everyday Living and Learning: Ways of Integrating Music with Other Experiences, a Report. Washington: The Conference, 1960.

Music Educators National Conference. "Self-Survey for School Music Systems." Music Educ. Res. Bull., No. 15, Chicago: The Conference, 1934.

Music Educators National Conference. State and National School Music Competition-Festivals Manual. Chicago: The Conference, 1941.

Music Educators National Conference, Committee on Elementary School Music Curriculum. "Music Curriculum of the Elementary School." Music Educ. J., 32 (March, 1946), 32-3.

Music Educators National Conference, Committee on Graduate Study in Music Education. "Graduate Study in Music Education." J. Res. Music Educ., 2 (Fall, 1954), 157-170.

Music Educators National Conference, Committee on Music Rooms and Equipment, 1952-54. Music Buildings, Rooms, and Equipment, Edited by Clarence J. Best. Washington, D.C.: The Conference, 1955.

Music Educators National Conference, Committee on Operettas and Operas in the Schools. "Operettas and Operas in Schools." In Yearbook of the Music Educators National Conference: Twenty-ninth Year, 1939. Chicago: Music Educ. Nat. Conf., 1936, pp. 336-339.

Music Educators National Conference, Official Committee Report. "School Music in Community Live." In Music Educators National Conference Book of Proceedings. Chicago: The Conference, 1934.

Music Educators National Conference, Research Council. "Basic Program for Music Study; Grades Four, Five and Six; a Preliminary Report." Music Educ. J., 24 (May, 1938), 16-17.

Music Educators National Conference, Research Council. "Institutions Offering the Doctorate; Report of a Survey by the Music Education Research Council." Music Educ. J., 36 (June, 1950), 54.

Music Educators National Conference, Research Council. "Music Educ. Research Council; Biennial Report Adopted, New York, April 1, 1936." In Yearbook of the Music Educators National Conference, 1936. Chicago, The Conference, 1937, pp. 405-406.

Music Educators National Conference, Research Council. "Music in Senior High Schools." Music Educ. J., 23 (October, 1936), 29.

Music Educators National Conference, Research Council. Music Supervision and Administration in the Schools, Research Council." Bulletin No. 18. Chicago: The Conference, 1949.

Music Educators National Conference, Research Council. "Music Supervision in the Public Schools." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1937, pp. 93-100.

Music Educators National Conference, Research Council. Musical Development of the Classroom Teacher, Research Council Bulletin No. 5. Chicago: The Conference, 1951.

Music Educators National Conference, Research Council. "Outline of a Program for Music Education; Report." In Yearbook of the Music Educators National Conference, 1939-40. Chicago: The Conference, 1941, pp. 132-134.

Music Educators National Conference: Statewide Music Education Committee. "The Duties of a State Music Supervisor and/or Consultant." Unpublished Manuscript, 1949. (Ronald W. Cook, Chairman).

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: I. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: II. Bibliography for String Teachers. By Albert Wassell and Walter Harderer. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: III. String Teacher and Music Dealer Relations and Problems. By John W. Shepard, et al. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Programs in Music Education: IV. Recruiting Strings in the Schools. By William H. Hoppe, et al. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: V. Interesting String Majors in Music Education. By Gerald H. Doty. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: VI. Why Have A String Program? By Markwood Holmes. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: VII. The Selection and Care of a String Instrument. By Frank W. Hill, et al. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: VIII. Basic Principles of Double Bass Playing. By Edward J. Krolic. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: IX. Basic Principles of Cello Playing. By Louis Potter, Jr. Washington: The Conference, 1957.

Music Educators National Conference. String Instruction Committee. The String Instruction Program in Music Education: X. Basic Principles of Violin Playing. By Paul Rolland. Washington: The Conference, 1959.

"Music for the Schools of Missouri." Jefferson City, Mo.: State Dept. Educ., 1962.

Music Supervisors National Conference. "Report of Subcommittee on Music Appreciation for the First Six Grades." In Paul J. Weaver (Ed.), Journal of Proceedings of Music Supervisors National Conference, 1930. Ithaca, N.Y.: The Conference, 1930, pp. 229-45.

Music Supervisors National Conference, Research Council. "Newer Practices and Tendencies in Music Education." In Paul J. Weaver (Ed.)., Journal of Proceedings of Music Supervisors National Conference. Ithaca, N.Y.: The Conference, 1930, pp. 269-287.

Music Supervisors National Conference. Standard Course of Study, Res. Council Bull. No. 13. Chicago: The Conference, 1931.

Myers, Allen. "Music as a Therapeutic Agent in the Rehabilitation of Physically Handicapped Children with Special Reference to Cerebral Palsy and a Survey of Music Education and Music Therapy in Facilities Educating Physically Handicapped Children." Unpublished Doctoral Dissertation, State University of Iowa, 1954, (Ph.D.). (Univ. Micro. No. A54-3516; D.A. Vol. 14, p. 2365).

Myers, Louise Kifer. "Music Education in the Pre-service Training of Elementary School Teachers." Teacher Educ. J., 4 (September, 1942), 66-72.

Nallin, Walter E. "An Introduction to Musical Development." Unpublished Doctoral Dissertation, New York University, 1946, (Ed.D.). (Univ. Micro. No. 944; D.A. Vol. 8, p. 49).

_____. "What's Happening in Appreciation." Music J., 8 (November, 1950), 19.

National Association of Secondary School Principals. "The Function of Music in the Secondary School Curriculum." Bull. Nat. Ass. Secondary Sch. Principals, 36:189 (November, 1952).

National Research Council, Committee on Child Development. Child Development: Abstracts and Bibliography, 1927. Washington, D.C.: Nat. Res. Council, 1927.

National School Band Association, Committee on Adjudication. "Standards of Adjudication." Chicago: The Association, 1936.

Neil, R. J. "The Development of the Competition-Festival in Music Education." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1944, (Ph.D.).

Neilson, F. "Music and Learning." Amer. J. of Economics and Sociology, 17 (April, 1958), 225-236.

Neiswender, Charles. "Is it too Late to Teach All Children to Sing?" Music Educ. J., 41 (September, 1954), 33-34.

_____. "Selected Songs of Schubert for the Beginning Voice Class at the High School and Collegiate Level." Unpublished Doctoral Dissertation, University of Wyoming, 1955, (Ed.D.).

Nelson, E. "Extra-class Activities and Student Attitudes." Amer. Sociol. Rev., 4 (1939), 823-826.

Nettl, Bruno. "Notes on Infant Development." Musical Quart., 42 (January, 1956), 28-34.

Neubert, Richard G. "Music Experiences Provided for Pupils in the Tenth, Eleventh and Twelfth Grades of the Public Secondary Schools of Pennsylvania, 1959-60." Unpublished Doctoral Dissertation, New York University, 1960, (Ed.D.). (Univ. Micro. No. 60-3774; D.A. Vol. 21, p. 1213).

Neumann, Frederick C. "Survey of the Basic Doctrines of Violin Left Hand Technique (Including the Position of the Body)." Unpublished Doctoral Dissertation, Columbia University, 1952, (Ph.D.). (Univ. Micro. No. 4225; D.A. Vol. 12, p. 632).

New York Society for the Experimental Study of Education. "Music in the Elementary Schools." The Advancing Front of Education; 1943 Yearbook of the Society, pp. 132-134.

Newman, W. S. "Controlled Experiment in the Comparative Evaluation of High School Theory Methods." In Proceedings of the Music Teachers National Association, 1940. Pittsburgh: The Association, 1941, pp. 287-294.

Newmann, Millard J. "Criteria for Departmental Self-Appraisal of Music Teacher Education." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958, (Ed.D.). (Univ. Micro. No. 59-1112; D.A. Vol. 19, p. 2973).

Newton, Margaret. "Music for the Elementary Teacher." Music Educ. J., 40 (September-October, 1953), 67.

Nickson, A.F.B., and R. W. Muncey. "The Acoustic Conditions Accepted by Listeners in an Auditorium." Acustica, 9:4 (1959), 316-320.

Niemi, Allan L. "Acoustics Most Important in Planning the Music Department." Amer. School Board J., 125 (December, 1952), 42-44.

_____. "Housing School and Community Music Activities." Amer. School Board J., 125 (August, 1952), 44-46.

_____. "Music Department: Its Location and Equipment." Amer. School Board J., 125 (October, 1952), 37-38.

_____. "Planning the Housing of the School and the Community Music Activities." Unpublished Project Report, Teachers College, Columbia University, 1949, (Ed.D.).

_____. "Planning the Music Department Acoustical Treatment and Sound Insulation." Amer. School Board J., 125 (August, 1952), 44-46.

Noble, C. E. "Sight-Reading Psychology." Music J., 18 (September, 1960), 74-77.

Noe, Norman F. "A Survey of Selected Courses of General Music, with Special Reference to the Teachers' Background." Unpublished Master's Thesis, The Ohio State University, 1962, (M.A.).

Nohavec (Morgan), Hazel B. "The Functioning of Fundamental Reading Concepts in Music Education." Sixth Annual Reading Conference Report, Claremont, Calif.: Claremont College Library, 1941, pp. 85-98.

Nohlgran, R. S. "New School Band and Orchestra Buildings." School Musician, 7:18 (April, 1936), 18.

Norman, Theodore F. "The Graduate Student and Music Education." Education, 74 (September, 1953), 36-39.

Norris, Herbert T. "Vocal Music in the Elementary and Junior High Schools." In Yearbook of the Music Educators National Conference, 1937. Chicago: The Conference, 1938, pp. 257-263.

Norton, Donald B. "A Proposed Program of Instrumental Music Education for the Baltimore, Maryland, Public Schools." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1956, (Ed.D.).

Norton, Gloria. "A Study of the Program of Vocal Music in Secondary Schools." Unpublished Professional Paper, Sam Houston State Teachers College, 1950, (M.A.).

Norton, William W. "Model Facilities and Music Equipment for Schools." Supervisor's Serv. Bull. of Educ. Music Bureau, 9:4 (March-April, 1931), 11-12.

Novak, E. A. "The Production of an Amateur Musical Revue." Unpublished Doctoral Dissertation, The Ohio State University, 1963, (Ph.D.).

Nye, Bernard B. "The Boys' Glee Club in Junior High School." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1937, p. 221.

Nye, Robert E. "Critical Survey and Evaluation of Practices in Cooperative Supervision of Music in the Elementary School." Unpublished Doctoral Dissertation, University of Wisconsin, 1949, (Ph.D.).

Nye, Robert E. "An Elementary School Trys Music Tests." Music Educ. J., 37 (November-December, 1950), 30-31.

_____. "If You Don't Use Syllables, What Do You Use?" Music Educ. J., 39 (April, 1953), 41-42.

_____. "On Call Elementary Music Supervision." Educ. Music Magazine, 30 (November, 1950), 13.

Oblensky, (Prince) Alexis. "Passing from the Conscious to Subconscious Control in Vocal Practice." The Musician, 35:4 (April, 1930), 17.

O'Brien, C. C. "Part and Whole Methods in the Memorization of Music." J. Educ. Psychol., 34 (1943), 552-560.

_____. "Tone Color Discrimination of Grade VII Boys." J. Genet. Psychol., 67 (1945), 77-80.

O'Connor, J. "A Junior High School Project in Creative Correlation." Music Educ. J., 38 (September-October, 1951), 26.

Odesser, Elaine. "Music Branches Out." Childh. Educ., 25 (1949), 308-312.

Oldham, William E. "A Study to Determine Some of the Reasons for the Scarcity of Tenor Singers in High School Choral Ensembles." Unpublished Master's Thesis, University of Kansas, 1957, (M.M.E.).

Olsen, Angie L. "The Slow Learner in the High School General Music Class." Mo. J. of Res. in Music Ed., 1:1 (Autumn, 1962), 21-24.

Olson, Arne L. "Characteristics of Fifteen Year Old Boys Classified as Outstanding Athletes, Scientists, Fine Artists, Leaders, Scholars, or as Poor Students or Delinquents." Unpublished Doctoral Dissertation, University of Oregon, 1961, (Ph.D.).

Olson, David S. "An Analysis of Techniques Used in Teaching Chorus in the Junior High School." Unpublished Master's Thesis, University of Sou. California, 1956, (M.M.).

Olson, Robert G., and David K. Sengstack. "A Common Cause." Education, 76:7 (March, 1956), 443-444.

Ordway, Claire L. "Active Participation in Music by High School Graduates from Two Communities." Unpublished Project Report, Teachers College, Columbia University, 1959, (Ed.D.).

Orendorff, Horlds. "The Pre-Service Education of the Elementary Teacher in Music for the Service Area of Glenville State College in West Virginia." Unpublished Project Report, Teachers College, Columbia University, 1954, (Ed.D.).

Orshan, Herbert A. "The General Music Course in the New York City High Schools: A Formulation of Objectives for the Required General Music Course, with Recommendations for Improved Teaching and Administrative Practices." Unpublished Doctoral Dissertation, New York University, 1959, (Ed.D.). (Univ. Micro. No. 59-6227; D.A. Vol. 20, p. 4018).

Ort, Lorrene Love. "The Expanding Role of Creativity in an Elementary School." Unpublished Doctoral Dissertation, The Ohio State University, 1955, (Ph.D.).

Ortmann, O. "Creative Music in the School Curriculum." Peabody Bulletin, 28:2 (1932), 7-10.

Ortmann, O. "Research and the Conservatory." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1937, pp. 293-298.

Osborne, Charles E. Pedagogical Application of Flute Study to Teachers' Needs. Unpublished Doctoral Dissertation, Michigan State University, 1962, (Ph.D.). (Univ. Micro. No. 62-4454; D.A. Vol. 23, p. 1382).

O'Steen, Alton. A Survey of the Music Program of the Public Schools of Rutherford, N. J., with Evaluation and Recommendations. Unpublished Project Report, Teachers College, Columbia University, 1938, (Ed.D.).

O'Toole, W. "Rhythm of Learning and Creative Teaching." In Proceedings of the Music Teachers National Association, 1946. Pittsburgh: The Association, 1946, pp. 223-229.

Otterstein, Adolph W. "Music in the Activity Program." Music Educators Journal, 24:4 (February, 1938), 25-27.

_____. "Music Training for General Classroom Teachers." In Yearbook of the Music Educators National Conference. Chicago: The Conference, 1938.

Ottman, Robert W. "A Statistical Investigation of the Influence of Selected Factors on the Skill of Sight-Singing." Unpublished Doctoral Dissertation, North Texas State College, 1956, (Ph.D.). (Univ. Micro. No. 56-1194; D.A. Vol. 16, p. 763; P.A. Vol. 31, p. 435. No. 5079).

Otto, Richard A. "A Critical Analysis of the Music Curriculum in Senior High Schools in Communities of 25,000 to 75,000 in the State of Connecticut." Unpublished Doctoral Dissertation, The University of Connecticut, 1957, (Ph.D.). (Univ. Micro. No. 23-112; D.A. Vol. 17, p. 2631).

Pappoutsakis, Ippocrates. "A Comparison of Two Methods of Conducting Courses Constituting the Requirement in Music for Elementary Education Students." Unpublished Master's Thesis, New England Conservatory of Music, 1956, (M.M.).

Parker, R. G. "The Role of the Music Contest and Festival in the Development of a Well-Balanced Program of Music Education." Unpublished Project Report, Teachers College, Columbia University, 1955, (Ed.D.).

Parker, Ruth Chastain. "An Evaluation of Curriculum Guides in Music for the Elementary Schools." Unpublished Project Report, Teachers College, Columbia University, 1958, (Ed.D.).

Parnell, Dorothy R. "Some Problems of the Adolescent Boy in the Junior High School Chorus." Unpublished Master's Thesis, Midwestern University, 1955, (M.M.E.).

Pate, John E. "Practices and Opinions Regarding Pre-Service Preparation for Teachers of Emotionally Disturbed Children." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1960, (Ed.D.). (Univ. Micro. No. 60-5855; D.A. Vol. 21, p. 2207).

Patnoe, Herbert D. "Preparation of Public School Music Teachers in Selected Cities Maintaining Professional or Semi-Professional Civic Orchestras, (Research Study No. 1.)." Unpublished Doctoral Dissertation, Colorado State College, 1962, (Ed.D.). (Univ. Micro. No. 63-1127; D.A. Vol. 23, p. 3922).

Patterson, Andy J. "A Place for Theory in Choral Programs." Texas Choirmaster Magazine, (August, 1961), 12.

Patterson, Charles H. "An Experimental Study of the Effect of Soothing Background Music on Observed Behavior Indicating Tension of Third Grade Pupils." Unpublished Doctoral Dissertation, University of Virginia, 1959, (Ed.D.). (Univ. Micro. No. 59-4251; D.A. Vol. 20, p. 1271).

Paulson, L. "It Can Be Done: An Experiment in Correlation in the Elgin Public Schools." Educ. Music Magazine, 31 (September-October, 1951), 14-15.

Pearce, Frederick W. "Basic Physical Needs in Today's Music Department." The New York State School Music News, 12 (April, 1949), 21-22.

Pechstein, Louis A., and L. P. Monk. "Musical Aptitude in Relation to a High School Music Program." School Rev., 48 (June, 1940), 445-50.

Pence, John R. "Theoretical Considerations and Illustrative Approaches in Professional Education Methods Courses for Teachers of Music." Unpublished Doctoral Dissertation, University of Illinois, 1962, (Ed.D.). (Univ. Micro. No. 62-6204; D.A. Vol. 23, p. 2810).

Pengilly, Elizabeth. "A Comparative Study of Two Methods of Class Violin Teaching for Beginners in the Fifth and Sixth Grades." Unpublished Master's Thesis, DePauw University, 1935, (M.M.).

Pepinsky, Abe. "Contributions of Science to an Appreciation of Music." In Theodore M. Finney (Ed.), Proceedings of the Music Teachers National Association: Thirty-seventh Series, 1943. Pittsburgh, Pa.: The Association, 1943, 94-112.

_____. "The Nature of Rhythmic Response." In Theodore M. Finney (Ed.) Proceedings of the Music Teachers National Association: Fortieth Series, 1946. Pittsburgh, Pa.: The Association, 1946, 321-329.

_____. "Psychological Experiments in Music." Amer. Music Teacher, (November-December, 1951), 2-3.

Pepinsky, Minerva. "Christmas Programs." Illinois Educ., 50 (1961), 127.

_____. "Mozart for Elementary Grades." Music J., 14:3 (1956), 42-43.

_____. "Music for Every Child?" Music Educ. J., 33:1 (1946), 50-54.

_____. "Sixth-Grade Children's Attitudes Toward Music of Gluck, Haydn, Mozart and Toward Other Music." Unpublished Doctoral Dissertation, Indiana University, 1959, (D.M.E.). (Univ. Micro. No. 59-5318; D.A. Vol. 20, p. 3771).

_____. Using Musical Background and Attitude Inventories for Improved Music Education in Grades Four to Twelve, Educ. Bull. Service, Dekalb, Ill.: Northern Ill. Univ., (n.d.), (Mimeographed).

Perez-Lugo, Elvira. "A Course of Study for the Seventh Grade General Music Classes at Laredo, Texas." Unpublished Doctoral Dissertation, Chicago Musical College, 1955, (D.M.E.).

Perham, Beatrice. "An Environment for Music." Progressive Educ., 12 (October, 1935), 409-12.

Perkins, Clella Lester. How to Teach Music to Children. Chicago: Hall and McCreary, 1936.

Perley, Roger A. "Status Study of General Music Education in the Public Secondary Schools of Illinois." Unpublished Professional Paper, Northern Illinois University, 1957, (M.S.).

Pernicky, Jack. "Goals of Music Education." In E. Thayer Gaston (Ed.), Music Therapy 1957. Lawrence, Kansas: The National Association for Music Therapy, Inc., 1958, pp. 129-131.

Perry, Murvin H. "Reading, Listening and Viewing Behavior of Children in Grades Five through Twelve in the Tipton, Iowa Public Schools." Unpublished Doctoral Dissertation, State University of Iowa, 1959, (Ph.D.). (Univ. Micro. No. 59-5731; D.A. Vol. 20, p. 2272).

Petersen, L. W. "Status of School Music", Salaries, Schedules, Private Lessons, Contests, Ensembles, Trips, Twirlers; Compilation of Answers to a Questionnaire. Instrumentalist, 5 (March-April, 1951), 24.

Peterson, Abel J. "The Scientific Rationale of Voice Production Made Applicable in Principle and Method to the Teaching of the College Voice Class." Unpublished Doctoral Dissertation, University of Oregon, 1959, (Ed.D.). (Univ. Micro. No. 59-654; D.A. Vol. 19, p. 2358).

Peterson, Wilbur J. "Training of Secondary School Music Teachers in the Undergraduate Programs of Colleges and Universities of Seventeen Western States." Unpublished Doctoral Dissertation, University of Oregon, 1954, (Ed.D.).

Pfeifer, Francis L. "The Relation to Music Education of the Lyceum Course in Public High Schools West of the Mississippi. Unpublished Doctoral Dissertation, Chicago Musical College, 1955, (D.M.E.).

Phalen, Marion M. "Song Preferences with Relation to Intelligence and Music Talent." Unpublished Master's Thesis, Syracuse University, 1944, (M.S.).

Phifer, James W. "An Appraisal of Music Education in Knoxville and Knox County Schools, 1961-1962." Unpublished Doctoral Dissertation, University of Tennessee, 1962, (Ed.D.). (Univ. Micro. No. 63-4108; D.A. Vol. 23, p. 4707).

Philips, Caroline P. "Sneers and Statistics: Comments on Findings of a National Music Survey." Musician, 53 (September, 1948), 82.

Picerno, Vincent J. "Personal Characteristics of Some Successful Music Teachers in Erie County, New York." Unpublished Doctoral Dissertation, Northwestern University, 1955, (Ed.D.). (Univ. Micro. No. 15-156; D.A. Vol. 16, p. 74).

Pickford, R. W. "Aesthetic and Technical Factors in Artistic Appreciation." Brit. J. Psychol., 38 (1948), 135-141.

Pierce, Anne E. "The Selection and Organization of Music Materials." In Guy M. Whipple (Ed.). Music Education, Thirty-fifth Yearbook of The National Society for the Study of Education, Part II. Bloomington, Ill.: Public School Pub. Co., 1936, pp. 147-165.

_____. "Social Service Implications of School Music Teaching." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 156-158.

_____., and Robert S. Hilpert. Instruction in Music and Art: National Survey of Secondary Education, (U.S.O.E. Bulletin No. 17), Washington: U.S. Govt. Printing Office, 1932.

Pierce, Anne E., and R. S. Hilpert. "Music." In Instruction in Music and Art, (Nat. Survey of Secondary Educ., Monograph No. 25), Washington: U.S. Govt. Printing Office, 1933, pp. ii-43.

Pierce, Margret Morey. "A Survey of the General Music Class in the Wisconsin Public High Schools." Unpublished Master's Thesis, Northwestern University, 1956, (M.M.).

Piper, Evelyn. "An Evaluation of the Undergraduate Elementary Teacher Education Program at the University of Oregon, Based on the Opinions of Graduates." Unpublished Doctoral Dissertation, University of Oregon, 1960, (Ed.D.). (Univ. Micro. No. 60-5401; D.A. Vol. 21, p. 2209).

Pittenger, Theodore L. "How Participation in Educational Music Radio Broadcasting Benefits the Music Student at Northeastern State College, Tahlequah, Oklahoma." Unpublished Doctoral Dissertation, Chicago Musical College, 1953, (D.M.Ed.).

Pitts, Carol M. "Securing Correct Intonation in the Training of A Cappella Choirs." In Yearbook of the Music Supervisors National Conference, 1932. Chicago: The Conference, 1932, pp. 138-139.

Pitts, Lilla Belle. "The Advantages to Music in an Integrated Program." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 344-346.

Pittsburgh, Pa., Public Schools, Dept. of Curriculum and Research. "The Vocational Value of Music to High School Pupils." Curr. Study and Educ. Res. Bull., Pittsburgh Pub. Schools, 4:2 (November-December, 1929), 96-120.

Plessas, Gus P. "Reading Abilities and Intelligence Factors of Children Having High and Low Auding Ability." Unpublished Doctoral Dissertation, University of California, 1957, (Ed.D.). (Univ. Calif. Microfilm No. Cu-2680).

Plumb, D. Donald. "Relative Influence of Music Versus Lyrics upon Children's Choice of Song." Unpublished Master's Thesis, Colorado State College of Education, 1937, (M.A.).

Polking, K. "New Idea in Music Education: The Co-op Plan of Work and Study." Etude, 70 (January, 1952), 13.

Polnauer, Frederick F. "Bio-Mechanics; A New Approach to Music Education." J. Franklin Institute, 254 (October, 1952), 297-316.

Porter, Don. "An Analysis of Musical Interpretation for the Stage Band in the Secondary Schools of the United States." Unpublished Master's Thesis, University of Nevada, 1962, (M.A.).

Potter, Gladys, L. "A Study of the Use of the Radio in a Group of California Schools." Calif. J. Elementary Educ., 5 (August, 1936), 59-64.

Poznanski, Mischa. "Violin Harmonics and Their Usage in Performance." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 62-4913; D.A. Vol. 23, p. 1734).

Prather, Frank L. "An Interpretative Analysis of a Selected List of Choral Music in the Contemporary Idiom for Senior High School." Unpublished Master's Thesis, Central Washington College of Education, 1959, (M.Ed.).

Pratt, C. C. "Structural vs. Expressive Form in Music." J. Psychol., 5 (1938), 149-156.

_____. "The Relation of Emotion to Musical Value." In Karl W. Gehrkens (Ed.) Proceedings of the Music Teachers National Association, Thirty-third Series, 1938.

Premer, Shirley M. "A Study of a Unit Plan as a Basis for Functional Music Experiences in the Junior High School." Unpublished Project Report, Univ. of Denver, 1957, (M.A.).

Prescott, Gerald R. "School Music Values and the Administrator." Nations Schools, 50 (November, 1952), 65-6.

Preus, S. D. "Coordination is the Key; a Report of a Joint Project of Music Education and Elementary Education Majors." Music Educ. J., 48 (January, 1962), 86-88.

Price, Gordon W. "Program Changes in Public Junior High Schools of Missouri, 1914-1952." Unpublished Doctoral Dissertation, University of Missouri, 1953, (Ed.D.). (Univ. Micro. No. A53-1938; D.A. Vol. 13, p. 1119).

Procasky, Charles. A Guide for Improving the Staging of High School Choral Performances. Unpublished Project Report, Teachers College, Columbia University, 1959, (Ed.D.).

Proschowski, Frantz. "Standardizing Voice Teaching in Public Schools." In Yearbook of the Music Supervisors National Conference, 1932. Chicago: The Conference, 1932, pp. 102-104.

Pryor, Robert E. "A Report on the Development of Piano Instruction in the Fourth Grades of the Nathan Hale School in Moodus, Connecticut." Unpublished Project Report, Teachers College, Columbia University, 1951, (Ed.D.).

Quarles, James T. "Report of the Committee on Literature about Music." In Proceedings of the Music Teachers National Association. Pittsburgh: The Association, 1940, pp. 448-461.

Rafferty, Sadie. "Report of Music Literature, Theory, Harmony, and Composition Committee." In H. N. Morgan (Ed.), Music in American Education. (Source Book No. 2), Washington: Music Educators National Conference, 1955, p. 210.

_____., and Joseph J. Weigand. The Function of Music in the Secondary School Curriculum. Chicago: Music Educators National Conference, 1952.

Rafter, L. "Educational Concerts: A New Approach." Hinrichsen's Musical Yearbook, 6 (1945-1950), 185-189.

Ralston, James S. "The Influence of Text on Choice of Choral Numbers by High School Choral Members." Unpublished Master's Thesis, University of Kansas, 1958, (M.M.E.).

Ramm, Katharine M. "Is Monotonism and Indication of Maladjustment?" Smith Coll. Stud. Soc. Work, 17 (1946), 126-127.

Ramsey, Homer W. "The Role of General Music in the Curriculum of the Secondary School." Unpublished Doctoral Dissertation, The Ohio State University, 1957, (Ph.D.). (Univ. Micro. No. 50-1095; D.A. Vol. 18, p. 2033).

Rankin, Dorothy. "The Teaching of Fundamentals of Music to the Elementary Classroom Teacher." Unpublished Master's Thesis, Ohio State University, 1952, (M.A.).

Rapoport, Anatol. "Music and the Process of Abstraction." E.T.C.: Rev. Gen Semantics, 4 (1947), 182-195.

Ratcliff, Donald B. "A Study of the Value of Motility Rate in Predicting Performance Speed." Unpublished Master's Thesis, Jordan College of Music, Butler University, 1950, (M.M.).

Ratcliff, Emma V. "A Study of the Status of the Choral Music Program in Texas Public High Schools." Unpublished Master's Thesis, University of Texas, 1953, (M.M.).

Ray, Earl R. "Attitudes and Interests of High School Students in Music." Unpublished Master's Thesis, Colorado State College of Education, 1942, (M.A.).

Razran, G. "The Conditioned Evocation of Attitudes." J. Exp. Psycho., 48 (1954), 278-282.

Rea, Ralph C. "Difficulties Encountered in Sight Reading." Instrumentalist, 13 (September, 1958), 14.

_____. "An Experimental Program for Improving the Sight-Reading Ability of Cornet and Clarinet Players." Unpublished Doctoral Dissertation, State University of Iowa, 1954, (Ph.D.). (Univ. Micro. No. 7571; D.A. Vol. 14, p. 984).

_____. "Participation after Graduation." Music Educ. J., 42 (June-July, 1956), 58-59.

Rebmann, Victor L. F. "Experiments in Teaching Sight-Reading with Systems Other Than the Movable Do." Research Council No. 13. Chicago: Music Supervisors National Conference, 1930.

Redburn, Grace McCoy. "A Comparative Study of the Required Music Courses in the Elementary Curricula of State Teachers Colleges." Unpublished Master's Thesis, University of Washington, 1936, (M.M.).

Redfield, J. "Certain Anomalies in the Theory of Air Column Behavior in Orchestral Wind Instruments." J. Acoust. Soc. Amer., 6 (1934-35), 34-46.

Redman, Shirley E. "The Musical Development of the Elementary Classroom Teacher." Unpublished Master's Thesis, The Ohio State University, 1955, (M.A.).

Redner, Arthur L. "What is Happening in Our Public Schools Today?" In Theodore M. Finney (Ed.), Proceedings of the Music Teachers National Association: Forty-third Series, 1950. Pittsburgh, Pa.: The Association, 1951, 193-195.

Reichard, Maurice. "The Effect of Musical Study Upon Appreciation." Unpublished Master's Thesis, The Ohio State University, 1945, (M.A.).

Reid, Seerley, and Daniel Day. "Radio and Records in Education." Rev. Educ. Res., 12 (June, 1942), 305-322.

Reimer, Alvin J. "A Comparison of Two Methods of Teaching Instrumental Music to Beginners." Unpublished Master's Thesis, University of Kansas, 1944, (M.S.).

Reinertson, Glenn. "An Experimental Study to Determine the Advantages of Selective Membership for Mixed Chorus in a Midwestern High School." Unpublished Master's Thesis, Northwestern University, 1956, (M.M.).

Remmers, H. H., W. R. Thompson, and A. E. Vaurio. "The Effect of Participation in Extra-Curricular Music Upon Scholastic Achievement." Purdue Univ. Stud. Higher Educ., No. 46 (1942), 5-10.

Remsen, Lester E. "A Study of the Natural Trumpet and Its Modern Counterpart." Unpublished Doctoral Dissertation, University of Southern California, 1960, (D.M.A.). (Univ. Micro. No. 60-6216; D.A. Vol. 21, p. 1587).

Resler, Cleo. "A Comparative Study of the Relative Values of Voice Class Procedures." Unpublished Master's Thesis, The Ohio State University, Columbus, 1940, (M.A.).

Reuter, Georgia S. "Remedial Treatment for Inaccurate Singers." Educ. Music Magazine, 35 (January-February, 1956), 19-20; 35 (March-April, 1956), 41-45.

Reynolds, George E. "Environmental Sources of Musical Awakening in Pre-School Children." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ed.D.). (Univ. Micro. No. 60-3983; D.A. Vol. 21, p. 1214).

Rezatto, John L. "An Appraisal of the Organization and Techniques of Vocal Music Classes in Selected State Teachers Colleges." Unpublished Doctoral Dissertation, University of Colorado, 1951, (Ed.D.).

Rhinehart, Charles Bennett. "Consistency in the Perception of Timbre, Rhythm, Tempo, and Harmony." Unpublished Master's Thesis, The Ohio State University, 1952, (M.A.).

_____. "Incidence and Causes of Withdrawal from Public School Music Teaching." Unpublished Doctoral Dissertation, The Florida State University, 1962, (Ph.D.). (Univ. Micro. No. 63-4390; D.A. Vol. 24, p. 323).

Rhodes, John C. "The Use of Oral Interpretation of Song Texts in the Education of Teachers of Vocal Music at the University of Tennessee." Unpublished Project Report, Teachers College, Columbia University, 1955, (Ed.D.).

Richards, James E. "Transfer Problems for the Music Major at the College Level." Southwestern Musician, (April, 1957), 17-20.

Richardson, Thomas F., and Charles F. Lehman, Jr. "Certain Characteristics of Baton Twirlers." Jour. Res. Music Educ., 5 (Spring, 1957), 31-35.

Riemenschneider, Albert. "Music Education in Higher Institutions." North Central Ass. Quart., 15 (October, 1940), 174-184.

_____. "Survey of Music Education in the North Central Association." North Central Ass. Quart., 16 (October, 1941), 161-172.

Rigg, M. G. "The Expression of Meanings and Emotions in Music." In Clarke, F. P. and M. C. Nahm, Philosophical Essays in Honor of Edgar Arthur Singer, Jr. Philadelphia: Univ. Penn. Press, 1942.

Riggin, Glen W. "Developing Instructional Materials for Beginning Students of Wind Instruments." Unpublished Doctoral Dissertation, University of Illinois, 1958, (Ed.D.). (Univ. Micro. No. 59-568; D.A. Vol. 19, p. 2974).

Righter, Charles B. "Wisconsin Makes A Survey." Music Educ. J., 24 (October-November, 1937), 35.

Robbins, J. C. "The Acoustic Significance of the Amplitude and Phase of Harmonics Present in a Source of Sound in a Room." J. Acous. Soc. Amer., 24 (1952), 380-383.

Roberts, Helen H. "Integrating and Disintegrating Effects of Sound Stimuli." Psychol. Monogr., 47 (1936), 401-407.

Robertson, James H. "Principles for General Music in Secondary Schools." Unpublished Doctoral Dissertation, University of Illinois, 1958, (Ed.D.). (Univ. Micro. No. 58-1732; D.A. Vol. 18, p. 1806).

Robinson, Richard R. "An Analysis of the Results Obtained in Achievement and Social Competence When the Production of an Operetta was Included in a Junior High School Program." Unpublished Doctoral Dissertation, Rutgers University, 1948, (Ed.D.).

Rodgers, Frances. "Variations in Aesthetic Environment of Artistic and Non-artistic Children." Univ. of Iowa Stud. in Psychol. No. 18, Psychol. Monogr. 45:1, Whole No. 200 (1933-34).

Rogge, Genevieve O. "Music as Communication, with Special Reference to its Role as Content." Unpublished Doctoral Dissertation, University of California at Los Angeles, 1953, (Ph.D.).

Roggensack, Delinda. Eyes and Ears for Music. St. Louis: Educational Publishers, 1954.

_____. "Survey of Needs for Music Education." Film Music Notes, 8 (September-October, 1948), 16-17.

Rohner, T. "Teaching Music Via Television." Instrumentalist, 15 (March, 1961), 38.

Rohrs, Dennis K. "Predicting Academic Success in a Liberal Arts College Music Education Program." Unpublished Doctoral Dissertation, State University of Iowa, 1962, (Ph.D.). (Univ. Micro. No. 63-960; D.A. Vol. 23, p. 2937).

Rollins, Rosalind. "A Study Treating the Application of Creative Teaching in Seventh Grade General Music Classes." Unpublished Master's Thesis, Univ. of Texas, 1949, (M.M.).

Root, Mary A. "A Comparative Analysis and Evaluation of Six Recent Textbooks for College Courses in Elementary School Music Methods." Unpublished Master's Thesis, Northwestern University, 1954, (M.M.).

Rose, Jess C. "Optimum Reverberation Time for Vocal Music Rooms." Unpublished Master's Thesis (Abstract), University of Kansas, 1955, (M.M.E.).

Rosenthal, Herman J. "Music Appreciation in a Country Day School." Music Educ. J., 21 (October, 1934), 51.

Rosenwald, Hans. "Prolegomena to a History of Musical Creativity." In E. G. Gilliland (Ed.), Music Therapy 1951. Lawrence, Kansas: The Natl. Ass. for Music Therapy, Inc., 1952, pp. 158-166.

Ross, Edgar Cecil, Jr. "An Experimental Study of the Effect of Analytical Guidance in Music Memorization." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-4046; D.A. Vol. 22, p. 2821).

Ross, George R. "An Evaluation of Certain Learning Techniques Introduced in the Required Music Course for Elementary Education Majors at Central Washington College of Education." Unpublished Doctoral Dissertation, Chicago Musical College, 1955, (Ph.D.).

Ross, Verne R. "A Preliminary Investigation of the Effect of Radio Reception on School Achievement." J. Appl. Psychol., 14 (1930), 456-464.

Ross, William E. "An Objective Study of Breathing for Singing." Unpublished Doctoral Dissertation, Indiana University, 1955, (Ed.D.). (Univ. Micro. No. 55-284; D.A. Vol. 15, p. 1628).

Rousseau, Eugene. "Materials for Making Clarinets." The Instrumentalist, 1956, 10:8 (April, 1956), p. 33.

Row, William Hamilton. "Training Rural Elementary Teachers: A Study to Determine the Opinions and Practices of the Teachers Who Have Experienced the Program for Training Rural Elementary Teachers at West Georgia College, Carrollton, Georgia, with Implications for the Improvement of That Program." Unpublished Doctoral Dissertation, New York University, 1953, (Ed.D.). (Univ. Micro. No. 5438; D.A. Vol. 13, 728).

Rowe, Robert A. "A Study of Factors Affecting the Music Programs of Junior and Senior High Schools in Fairfield County, Connecticut." Unpublished Doctoral Dissertation, The University of Connecticut, 1960, (Ph.D.). (Univ. Micro. No. 60-5250; D.A. Vol. 11, p. 2564).

Rowland, Monroe K. "Opinions of Goals of Secondary Education Held by Parents and by Educators." Unpublished Doctoral Dissertation, University of Michigan, 1960, (Ph.D.). (Univ. Micro. No. 60-6924; D.A. Vol. 21, p. 2181).

Royer, Fred L. "The Formation of Concepts with Auditory Stimuli." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1956, (Ph.D.). (Univ. Micro. No. 57-639; D.A. Vol. 17, p. 399).

Rubin-Rabson, Grace. "The Influence of Age, Intelligence and Training on Reactions to Classic and Modern Music." J. Genet. Psychol., 22 (1940), 413-429.

_____. "The Influence of Analytical Pre-study in Memorizing Piano Music." Arch. Psychol., 31:220 (1937).

_____. "Mental and Keyboard Overlearning in Memorizing Piano Music." J. Musicology, 3 (1941), 33-40.

_____. "The Psychology of Memorizing." Music Educ. J., 36:3 (January, 1950), 22-23.

_____. "Studies in the Psychology of Memorizing Piano Music: I. A Comparison of the Unilateral and Coordinated Approaches." J. Educ. Psychol., 30 (1939), 321-345.

_____. "Studies in the Psychology of Memorizing Piano Music: II. A Comparison of Massed and Disturbed Practice." J. Educ. Psychol., 31 (1940), 270-284.

_____. "Studies in the Psychology of Memorizing Piano Music: III. A Comparison of the Whole and the Part Approach." J. Educ. Psychol., 31 (1940), 460-476.

_____. "Studies in the Psychology of Memorizing Piano Music: IV. The Effect of Incentive." J. Educ. Psychol., 32 (1941), 45-54.

_____. "Studies in the Psychology of Memorizing Piano Music: VI. A Comparison of Two Forms of Mental Rehearsal and Keyboard Overlearning." J. Educ. Psychol., 32 (1941), 593-602.

_____. "Studies in the Psychology o f Memorizing Piano Music: VII. A Comparison of Three Degrees of Overlearning." J. Educ. Psychol., 32 (1941), 688-696.

_____. "Studies in the Psychology of Memorizing Piano Music: VIII. The Inhibitory Influence of the Same and of Different Degrees of Learning." J. Musicology, 5:1 (1947), 13-30.

Rush, Ralph E. "Basic Purposes and Objectives of Music Education." Music Educ. J., 38 (January, 1952), 43-44.

Russell, Myrtle, and Harry L. Tate. "Another Experiment with Monotones." Music Educ. J., 25 (February, 1939), 31.

Rutan, Harold D. "An Annotated Bibliography of Written Material Pertinent to the Performance of Brass and Percussion Chamber Music." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ed.D.). (Univ. Micro. No. 61-196; D.A. Vol. 21, p. 3481).

Saab, Helen T. "A Survey of Literature on So-called Monotones." Unpublished Master's Thesis, Canisius College, 1956.

Saetveit, Joseph G. "Frontiers in Music Education." Education, 76:7 (March, 1956), 408-413.

Salatino, Anthony J. "Certain Physical Problems Involved in Playing the Double Bass." Unpublished Project Report, Teachers College, Columbia Univ., 1962 (Ed.D.). (Univ. Micro. No. 63-3767; D.A. Vol. 23, p. 4380).

Samuelson, Agnes. "The Place of Music." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 26-33.

Sanderson, Helen E. "Differences in Musical Ability in Children of Different National and Racial Origin." J. Genet. Psychol., 42 (March, 1933), 100-19.

Sault, Robert E. "Integrating School Music with Community Life." Music Educ. J., 31:2 (November, 1944), 20-22.

Saunders, F. A. "Progress Report on Violin Research." J. Acoust. Soc. Amer., 10 (1939), 256.

Savage, Edith Jones. "The Development of Instruction in Music Reading in Public Schools of the United States." Unpublished Doctoral Dissertation, University of Colorado, 1960, (Ed.D.). (Univ. Micro. No. 61-842; D.A. Vol. 21, p. 3025).

Savige, Homer M. "The Relation of Music Supervisory Services to Certain Phases of Musical Accomplishment in Selected Florida County School Systems." Unpublished Doctoral Dissertation, The Florida State University, 1956, (Ph.D.). (Univ. Micro. No. 17-031; D.A. Vol. 16, p. 2179).

Savler, R. "Teaching the Reading of Piano Music." Music Educ. J., 32:1 (September-October, 1945), 22-23.

Scanlin, Janet B. "Changes in Music Preferences Related to Planned Listening Experiences in a Secondary School General Music Class." Unpublished Master's Thesis, The Ohio State University, 1962, (M.A.).

Scarborough, John A. "A Study of Provisions for Non-Sport Student Activities in Selected Small High Schools." Unpublished Project Report, Teachers College, Columbia University, 1957, (Ed.D.).

Schaeffer, M. "Status of Music Theory in High Schools." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 330-331.

Schewan, Robert. "Technical Considerations in the Selection of Music for High School Chorus." Unpublished Master's Thesis, Ithaca College, 1961.

Schinnerer, Mark C. "Administrator Talks About Music." Music Educ. J., 37 (April, 1951), 18-19.

Schmidt, Aaron. "Certain Integrants of Music Education Related to Participation in the Secondary School Music Program." Unpublished Doctoral Dissertation, The University of Nebraska Teachers College, 1961, (Ed.D.). (Univ. Micro. No. 61-1472; D.A. Vol. 21, p. 3810).

Schmidt, D. T. "Creativity is an Attitude; an Approach to Elementary Music Education." Music Educ. J., 41:3 (January, 1955), 23-25.

Schmidt, Wallace W. "General Premises Applied to the Analysis and Writing of Piano Accompaniments for Elementary School Songs." Unpublished Project Report, Teachers College, Columbia University, 1961, (Ed.D.).

Schneider, M. F. "Logistics of Music Education." In Proceedings of the Music Teachers National Association, 1944. Oberlin: The Association, pp. 388-398.

Schoen, Max. "Experimental Problems in Music Listening." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 389-394.

_____. "Report of the Committee on Experimental Psychology of Music." In Karl W. Gehrkens (Ed.), Proceedings of the Music Teachers National Association: Thirty-first Series, 1936. Oberlin, O.: The Association, 1937, 362-375.

_____. "Report of the Committee on Music Tests and Measurements." In Karl W. Gehrkens (Ed.), Proceedings of the Music Teachers National Association: Thirtieth Series, 1935. Oberlin, O.: The Association, 1936, pp. 320-350.

_____. "Report of the Committee on Music Tests and Measurements." In Karl W. Gehrkens (Ed.), Proceedings of the Music Teachers National Association: Twenty-ninth Series, 1934. Oberlin, O.: The Association, 1935, 319-329.

Schueller, H. M. "Use and Decorum of Music as Described in British Literature, 1700-1780." J. History of Ideas, 13 (January, 1952), 73-93.

Schulenburg, Robert. "The Care of Band Instruments." In Yearbook of the Music Educators National Conference, 1939-1940. Chicago: The Conference, pp. 285-294.

Schultz, Arnold. The Riddle of the Pianist's Fingers. Chicago: Univ. of Chicago Press, 1936.

Schultz, G. Lloyd (Ed.). State Supervision of Music. Report of the National Council of State Supervisors of Music. Washington: Music Educ. Nat. Conf., (n.d.).

Schuman, William. "Problems in the Field of Music." Education. International Musician, 59:9 (March, 1961), 22-23.

Schwarz, Ira P. "Part I: Some Aspects of the Use of Contemporary Music in the Secondary Schools with a Select List of Orchestral Materials. Part II: Divertimento for High School String Quartet. Part III: Concert Overture for High School Orchestra." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-5629; D.A. Vol. 22, p. 3695).

Schwin, Helen L. "Children First - Music Second." Music Educ. J., 31 (February-March, 1945), 28.

Schwin, Helen S. "An Experiment in Class Piano Teaching." School Music, 31 (May-June, 1931), 7-10.

Scott, David W. "A Study of the Effect of Changes in Vocal Intensity Upon the Harmonic Structure of Selected Singing Tones Produced by Female Singers." Indiana University, 1960 (Mus. D.). Unpublished Doctoral Dissertation. (Univ. Micro. No. 60-5325; D.A. Vol. 21, p. 1964).

Sear, H. G. "Music and Medicine." Music and Letters, 20:1 (January, 1939), 43-54.

Sears, William W. "A Study of Some Effects of Music Upon Muscle Tension as Evidenced by Electromyographic Recordings." Unpublished Doctoral Dissertation, University of Kansas, 1960. (Ph.D.).

Seashore, Carl E. Approaches to the Science of Music and Speech, University of Iowa Studies: Series Aims Progress Research, No. 41, 1933.

_____. "The Discovery and Guidance of Musical Talent." In Guy M. Whipple (Ed.)., Thirty-fourth Yearbook of the National Association for the Study of Education, Part II. Chicago: The Association, 1935, p. 447.

_____. "Educational Guidance in Music." Sch. Soc., 45 (1937), 385-393.

_____. "The Quality of a Musical Tone." Psychol. Bull., 38 (1941), 548.

_____. "Why Do We Love Music?" Music Educ. J., 25:1 (1938), 28.

_____., and D. Rothschild. "Timbre of Orchestral Instruments." J. Acoust. Soc. Amer., 6 (1934), 55.

_____., D. Lewis, and J. G. Saetveit. Seashore Measures of Musical Talent. New York: Psychological Corp., 1956.

Seashore, H. G. "The Psychologist in a School of Music." J. Consult. Psychol., 3 (1939), 24-29.

Seymour, Harriet Ayer. "Creative Expression in Music." In Gertrude Hartman and Ann Shumaker (Eds.). Creative Expression. New York: John Day Co., 1932, pp. 81-85.

Shackford, Charles. "Some Aspects of Pitch Perception." J. Music Theory, 5 (1961), 162-203.

Shake, J. Curtis, and James A. Smith. "Giving Teachers in Training Confidence at the Piano." Elem. School J., 52:9 (May, 1952), 523.

Shambaugh, Robert F. "A Comparison of the Competencies Necessary to Teach Elementary General Music Education and the Measured Competencies of Elementary Classroom Teachers." Unpublished Doctoral Dissertation, University of Colorado, 1960, (Ed.D.). (Univ. Micro. No. 61-843; D.A. Vol. 21, p. 3116).

Shaw, Clarence S. "The Identification of Drill Procedures for Teaching String Instrument Rhythms and Articulation Techniques in the Public School." Unpublished Professional Paper, Arizona State College, 1962, (M.A.).

Shaw, W. Warren. "Modern Trends in Voice Class Instruction." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 215-224.

Sheehy, E. D. "Let Them Make Music." Childhood Education, 24 (1948), 352-356.

Shelley, Margaret A. "Small Vocal Ensembles in High School." Unpublished Project Report, Teachers College, Columbia University, 1956, (Ed.D.).

Shepard, John W. "Principles of Method in Group String Instrument Instruction." Unpublished Doctoral Dissertation, University of Illinois, 1954, (Ed.D.). (Univ. Micro. No. 10-546; D.A. Vol. 15, p. 92).

Shepard, Margaret Taylor. "Determining a Fair Balance Between Music Reading and Skills and Social and Recreational Singing." In Yearbook of the Music Educators National Conference, 1934. Chicago: The Conference, 1934, pp. 170-174.

Shetney, Orville B. "An Investigation of Dissonance Perception of Undergraduate Music Majors." Unpublished Doctoral Dissertation, Indiana University, 1956, (Ph.D.). (Univ. Micro. No. 57-247; D.A. Vol. 17, p. 153).

Shimp, Bennett. "Reliability of Association of Known and Unknown Melodic Phrases with Words Denoting States of Feeling." J. of Musicology, 1:4 (March, 1940), 23-35.

_____. "The Prediction of Success in College Music." Unpublished Doctoral Dissertation, The Ohio State University, 1947, (Ph.D.).

Showalter, N. D. Music in the Junior and Senior High Schools, 1930. Olympia, Washington.: Jay Thomas, Public Printer, 1930.

Shuck, L. "Experiment in Instrumental Music." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 365-371.

_____. "Planning and Executing an Integrated Program." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 310-313.

Silber, John J. "Aural Analytic Ability in Harmonic Dictation in Various Musical Media." Unpublished Doctoral Dissertation, Indiana University, 1955, (Ph.D.). (Univ. Micro. No. 55-1692; D.A. Vol. 15, p. 2541).

Silverman, Marvin L. "Ensemble Improvisation as a Creative Technique in the Secondary Instrumental Music Program." Unpublished Doctoral Dissertation, Stanford University, 1962, (Ed.D.). (Univ. Micro. No. 62-4037; D.A. Vol. 23, p. 1562).

Simmions, L. "Standardization in Teaching the Control of the Human Voice in Speech and Song." J. Acoust. Soc. Amer., 2 (1930), 6.

_____. "Two Points of View in Teaching the Control of the Human Voice in Speech and Song." J. Acoust. Soc. Amer., 2 (1930), 6.

Simon, B. et al. "The Recognition and Acceptance of Mood in Music by Psychotic Patients." J. Nerv. Ment. Dis., 14 (1951), 66-78.

Simons, Gene M. "Comparisons of Incipient Music Responses Among Very Young Twins and Singletons." Unpublished Doctoral Dissertation, The Florida State University, 1962, (Ph.D.). (Univ. Micro. No. 62-4633; D.A. Vol. 23, p. 1734).

Sisson, E. D., and B. Sisson. "Introversion and the Aesthetic Attitude." J. Gen. Psychol., 22 (1940), 203-208.

Sittner, H. "The Present State of Music Education." Int. Mus. Ed., 4 (Autumn, 1961), 139.

Sloan, Muriel R. "A Comparison of Group Responses to Auditory, Visual, and Kinesthetic Rhythms." Unpublished Doctoral Dissertation, The University of Wisconsin, 1958, (Ph.D.). (Univ. Micro. No. 58-2576; D.A. Vol. 19, p. 269).

Slonimsky, Nicolas. "Musical Children: Prodigies or Monsters?" Etude, 66:10 (October, 1948), 591-592.

Small, Arnold. "Harmonic Structure of the Violin Tone as a Function of Bow Speed and Bow Pressure." J. Acoust. Soc. Amer., 9 (1937), 79.

_____., and William Waldrop. "An Analysis of Tone Production Factors in Flute Playing." J. Acoust. Soc. Amer., 12 (1941), 472.

Smith, Alexander F. "Some Characteristics of High Level Talent as Found in Selected Connecticut High Schools." Unpublished Doctoral Dissertation, University of Connecticut, 1953 (Ph.D.). (Univ. Micro. No. A53-1906; D.A. Vol. 13, p. 1094).

Smith, G. B. "Intelligence and the Extra-curriculum Activities Selected in High School and College." Sch. Rev., 44 (1936), 681-688.

Smith, Geraldine F. "A Study of the Significance of the Small Vocal Ensemble in the Senior High Schools of Texas." Unpublished Master's Thesis, University of Texas, 1955, (M.M.).

Smith, H. J. "The Need of the Newer Subjects." Sch. Rev., 44 (1936), 497-505.

Smith, Henry P. "A Study in the Selective Character of American Secondary Education: Participation in School Activities as Conditioned by Socio-Economic Status and Other Factors." J. Educ. Psychol., 36 (April, 1945), 229-246.

Smith, James A. "Creative Teaching in Elementary Schools: Its Basis in Research, with Illustrations of Practice in Selected Areas." Unpublished Doctoral Dissertation, Syracuse University, 1955, (Ed.D.). (Univ. Micro No. 56-1739; D.A. Vol. 16, p. 1107).

Smith, Mildred M. "Audio-Visual Aids and Teaching Materials for Use in Junior High General Music Classes." Unpublished Master's Thesis, University of Kansas, 1959, (M.M.E.).

Smith, Robert B. "A Study of the Effect of Large-Group Vocal Training on the Singing Ability of Nursery School Children." Unpublished Doctoral Dissertation, University of Illinois, 1961, (Ed.D.). (Univ. Micro. No. 61-1667; D.A. Vol. 21, p. 3811).

Snow, W. B. "Change of Pitch with Loudness at Low Frequencies." J. Acoust. Soc. Amer., 8 (1936), 14-19.

Snyder, Alice M. Creating Music with Children. New York: Mills Music, Inc., 1957.

_____. "The Development, Construction and Standardization of a Test of Music Achievement." Unpublished Doctoral Dissertation, University of Oregon, 1958, (Ed.D.). (Univ. Micro. No. 58-2344; D.A. Vol. 19, p. 738).

Snyder, Keith D. "Public School Music Administration." Unpublished Project Report, Teachers College, Columbia University, 1953, (Ed.D.).

Sommers, Hobart H. "General Education and the Music Teacher." Music Educ. J., 39:6 (June-July, 1953), 19-21.

_____. Role of Music in General Education. Austin: Bureau of Public School Service, Division of Extension, Univ. of Texas, 1948.

_____. "Storm Warning." Educ. Music Magazine, 31 (March, 1952), 8-10.

Sonninen, Aatto A. The Role of the External Laryngeal Muscles in Length-Adjustment of the Vocal Cords in Singing: An Academic Dissertation. Lahden Kirjapaino-ja Sanomalehti-Oy, 1956.

Sopchak, Andrew L. "Individual Differences in Response to Different Types of Music, in Relation to Sex, Mood, and Other Variables." Psychol. Monogr., 69:11 (1955), 1-20.

_____. "Retest Reliability of the Number of Responses to Music." J. Psychol., 44 (1957), 223-226.

Sopkin, H. "Committee Report on Junior and Senior High School Orchestras." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference,

Sorensen, Neil R. "Pressure Level Ranges of Various Musical Instruments, and the Effects of Different Rooms on these Instruments." J. Acoust. Soc. Amer., 26 (1954, p. 933.

Southard, Charles W. "A Survey of the Choral Literature Presented in Public Performance in Class A and AA High Schools in the State of Illinois." Unpublished Master's Thesis, Illinois Wesleyan University, 1960, (M.M.E.).

Southern Conference for Music Education. "High School Music Practices and Needs in the South; report." In Yearbook of the Music Educators National Conference, 1939-40. Chicago: The Conference, 1940, pp. 160-162.

Southern Conference for Music Education. "Music in the Elementary Schools of the South--practices and Needs; Report." In Yearbook of the Music Educators National Conference, 1939-40. Chicago: The Conference, 1940, pp. 182-185.

Spalding, Clyde N. "Eleven Violin Duets for Grades Seven Through Twelve." Unpublished Master's Thesis, Arizona State College, 1959, (M.A.).

Spangler, George P. "Music Terminology in the Elementary School." Etude,(December, 1945), 684.

Spencer, H. S. "Ear Training in Music Education." Music Educ. J , 1947, (February-March), pp. 44.

Spencer, William G. "The Teaching of the Bassoon in the High School and College." Unpublished Project Report, Teachers College, Columbia University, 1958, (Ed.D.).

Spratt, Blanche. "The Adaptability of the Song Material of the Modern Music Textbook to the Adolescent Boy." Unpublished Master's Thesis, University of South Dakota, 1935.

Squire, Alan P. "An Annotated Bibliography of Written Material Pertinent to the Performance of Woodwind Chamber Music." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ed.D.). (Univ. Micro. No. 60-3999; D.A. Vol. 21, p, 1578).

Squire, Russel H. Introduction to Music Education. New York: Ronald Press Co., 1952.

Stanton, Hazel M. "Measurement of Musical Talent: The Eastman Experiment." Univ. of Iowa Stud.: Stud. in the Psychol. of Music, 2 (1935).

_____. "Research in Music: Looking Forward Thirty Years." Univ. of Iowa Studies, Series on Aims and Progress of Research, (New Series 134), 33 (1931), 136-138.

_____., and W. Koerth. "Musical Capacity Measures of Adults Repeated after Musical Education. A Study of Retest Scores and Ratings in the Seashore Measures of Musical Talent after Three Years of Music Education in the Eastman School of Music." University of Iowa Studies: Series on Aims and Progress of Research, No. 31 (1930), First Series, No. 189, 18.

Stein, Gertrude E. "A Study of the Relation of Music Instruction During Secondary School Years to Adult Musical Status, as Reflected in the Activities, Interests and Attitudes of Recent High School Graduates." Unpublished Doctoral Dissertation, University of Michigan, 1946, (Ph.D.). (Univ. Micro. No. 1080; D.A. Vol. 8, p. 91).

Stelzer, T. G. W. "Construction, Interpretation, and Use of a Sight-Reading Scale in Organ Music with an Analysis of Organ Playing into Fundamental Abilities." J. of Exper. Educ., 7 (September, 1938), 35-43.

Sterrett, Delbert E. "The Merits and Problems of Teaching Courses in Latin American Studies." Southeastern Latin Americanist Music, 4:3 (December, 1960), 1-7.

Steubing, Carl M. "The Mixed Chorus in the Small High School." Unpublished Master's Thesis, Eastman School of Music, 1950, (M.M.).

Stevens, D. "Recent Research." Musical Times, 102 (March, 1961), 152-154.

Stevens, Raymond H. "The Development of Two Experimental Sound Films in Teaching Elementary Music." Unpublished Doctoral Dissertation, State University of Iowa, 1958, (Ph.D.). (Univ. Micro. No. 58-2982; D.A. Vol. 19, p. 541).

Stevens, S. S. "The Direct Estimation of Sensory Magnitudes-Loudness." Amer. J. Psychol., 69 (1956), 1-25.

_____. "Pitch, Loudness, Volume and Density." Psychol. Bull., 31 (1934), 682-683.

_____. "The Psychophysiology of Loudness." Psychol. Bull., 33 (1936), 791.

_____. "The Relation of Pitch to Intensity." J. Acoust. Soc. Amer., 6 (1935), 150-154.

_____., and H. Davis. "Psychophysiological Acoustics: Pitch and Loudness." J. Acoust. Soc. Amer., 8 (1936), 1-13.

_____., and E. B. Newman. "On the Nature of Aural Harmonics." Proc. Nat. Acad. Sci., 22 (1936), 668-672.

_____., and J. Volkmann. "The Relation of Pitch to Frequency: A Revised Scale." Amer. J. Psychol., 53 (1940), 329-353.

_____., J. Volkmann, and E. B. Newman. "A Scale for the Measurement of the Psychological Magnitude Pitch." J. Acoust. Soc. Amer., 8 (1937), 185-190.

Stewart, John W. "Influence of Public School Music Education as Revealed by a Comparison of Forty Selected High School Music and Non-Music Students." Unpublished Doctoral Dissertation, The Florida State University, 1961, (Ed.D.). (Univ. Micro. No. 61-5657; D.A. Vol. 22, p. 2822).

Stocking, Glen O. "A Case Study of Five Selected Colorado Public School Instrumental Music Supervisors: Their Philosophies of Supervision, Their Methods and Their Techniques of Evaluating Student Teachers, (Research Study No. 1)." Unpublished Doctoral Dissertation, Colorado State College, 1961, (Ed.D.). (Univ. Micro. No. 62-1583; D.A. Vol. 22, p. 4230).

Stoll, Forrest D. "An Evaluation of the Music Education Curriculum at the University of Utah, with Recommendations for Future Development." Unpublished Doctoral Dissertation, The Ohio State University, 1960, (Ph.D.). (Univ. Micro. No. 61-946; D.A. Vol. 21, p. 3371).

Stone, D. R. "Mid-Nineteenth-Century American Beliefs in the Social Values of Music." Musical Quart., 43 (January, 1957), 38-49.

Streety, Henry M., Jr. "A Study of Enrollments in Texas Public High School Choral Ensembles." Unpublished Master's Thesis, University of Texas, 1951, (M.M.).

Strickland, Ruth, and Gertrude Stokes. "Attitudes and Appreciations in Third and Fourth Grade Music." Childhood Education, (March, 1936), 266.

Strickland, Virgil E. "Scheduling Music in Junior High School." Nations Schools, 48 (September, 1951), 43-4.

Strider, R. H. "The Negro's Contribution to Music Education." Music Educ. J., 39 (February-March, 1953), 27-28.

Stroessler, John H. "Music Teaching Competencies of Stanford Elementary Credential Candidates." Unpublished Doctoral Dissertation, Stanford University, 1949, (Ed.D.).

Stubbins, W. A., C. P. Lillya, and J. R. Frederick. "Effects of Blowing Pressure and Embouchure Factors on Trumpet Tone Production." J. Acoust. Soc. Amer., 28:4 (1956), 769.

Stulberg, J. "Orchestras in the Schools of Michigan." School Music, 32 (November, 1960), 48-49.

"Successful Music Careers." (The Stanford Music Journal Vocational Interest Research Test.) Music J., 12 (March, 1954), 17.

Suchman, Edward A. "Invitation to Music: A Study of the Creation of New Music Listeners by the Radio." In Lazarsfeld, Paul F., and Frank N. Stantion, Radio Research 1941. New York: Duell, Sloan, and Pearce, 1941, pp. 140-178.

Sullivan, Donald R. "An Analysis and Evaluation of Representative Junior High School Chorus Book Material." Unpublished Master's Thesis, Boston University, 1948, (M.M.E.).

Sundermann, Lloyd F. "Current Issues in Music Education." Music J., 12:1 (January, 1954), 38-41.

_____. "Early Methods of Popularizing Music Education." J. Musicology, 3:1 (1941), 60.

_____. "The Era of Beginnings in American Music Education, (1830-1840)." J. Res. Music Educ., 4 (Spring, 1956), 33-39.

_____. "Music Education Number." Education, 76:7 (March, 1956), 395-456.

_____. "Philosophical Concepts in the Expendability of Vocal Idealisms." Education, 76:7 (March, 1956), 449-452.

_____. "Problems in Graduate Teacher Education." Southwestern Musician, 17:4 (December, 1950), 4.

Surette, Thomas W. "General View of Music Education for Children." School Music, 32:4 (March-April, 1932).

_____. "Music Teaching in Schools." Progressive Educ., 7 (1930), 107-14.

Sutton, Willis A. "The Creative Spirit in Education." The Instructor, 56:6 (April, 1946), 14.

Swan, Fred C. "A Study of Vocal Methods and Tone Production and Their Application to the Young-Adult Singer's Problem." Unpublished Master's Thesis, University of Southern California, 1948, (M.M.).

Swann, W. F. G. "Certain Applications of Physical Principles to the Playing of Musical Instruments." Frank.Inst. J., 239 (January, 1945), 1-26.

Swanson, Frederick J. "When Voices Change: An Experiment in Junior High School Music." Music Educ. J., 46 (February-March, 1960), 50-56.

Swettman, William P. "Filmstrip Teaching Materials for Violin, Violoncello, Percussion, and Bassoon." Unpublished Project Report, Teachers College, Columbia University, 1952, (Ed.D.).

Tallmadge, N. H. "Teaching Improvisation." Music Educ. J., 47 (November-December, 1960), 58-60.

Tampke, Robert A. "The Function of Music Education in the Organization of Personality." Unpublished Doctoral Dissertation, The University of Texas, 1947, (Ph.D.).

Tatton, Douglass W. "Esthetic Preference Change and the Personality of the Student." Unpublished Doctoral Dissertation, Rutgers University, 1959, (Ed.D.).

Taubman, H. "Standards of Music Study in Schools." International Musician, 60 (February, 1962), 12

Taylor, Bernard U. "Group Voice Instruction." In Proceedings of the Music Teachers National Association, 1937. Oberlin, Oberlin, O.: The Association, 1937, pp. 107-109.

Taylor, Charles C. "Developing Musicianship in the Choral Rehearsal through the Use of Choral Recordings." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1950, (Ed.D.).

Taylor, Charles L. "A Critical and Comparative Analysis of the Vocal Music Material Covered in the Manuals of the World of Music, Music Hour, Hollis-Dann, and Foresman Series." Unpublished Master's Thesis, West Virginia University, 1940, (M.M.).

Taylor, Elizabeth. "A Study in the Prognosis of Musical Talent." Unpublished Doctoral Dissertation, University of Cincinnati, 1941, (Ed.D.).

Taylor, G. J. "Romeo and Juliet and West Side Story: An Experimental Unit." Engl. J., 51 (October, 1962), 484-485.

Taylor, Guy G. "An Evaluation and Recommended Development of the Music Education Program at Capital University." Unpublished Doctoral Dissertation, The Ohio State University, 1954, (Ph.D.). (Univ. Micro. No. 59-6650; D.A. Vol. 20, p. 2698).

Taylor, J. B. "Control of Pitch in Wind Instruments." J. Acoust. Soc. Amer., 3 (1932), 317.

Taylor, Katherine S. "An Autochthonous Approach to Music Appreciation." Music Educ. J., 35 (February, 1949), 17-19.

Taylor, Ruth M. "Evaluating Music Broadcasts for Children." Unpublished Master's Thesis, The Ohio State University, 1941, (M.A.).

Telford, C. W., and Harry Spangler. "Training Effects in Motor Skills." J. Exp. Psychol., 18 (February, 1935), 141-147.

Tennessee Department of Education. Music for Tennessee Schools: An Instructional Guide for Grades 1-6. Nashville: The Department, 1958.

Texas State Department of Education. Teaching of Music in Texas Public Schools. Bulletin No. 352. Austin: The Department, 1935.

Thomas, Helen Waller. "A Study of the Musical Interests and Attitudes of 804 Fifth and Sixth Grade Pupils in Grand Prairie, Texas." Unpublished Master's Thesis, University of Texas, 1954, (M.Ed.).

Thomas, Robert E. "A Report on Music Supervision in the Elementary Schools of Champaign, Illinois, 1954-1957." Unpublished Doctoral Dissertation, University of Illinois, 1957, (Ed.D.). (Univ. Micro. No. 25-297; D.A. Vol. 18, p. 608).

Thompson, Maurine. "Class Vocal Teaching." Music Educ. J., 22 (October, 1935), 18-20.

Thompson, Randall. College Music. New York: The Macmillan Co., 1935.

Thormodsgaard, Engebret A. "A Musical Approach to the Teaching of Choral Techniques and Music Reading in the Choral Rehearsal." Unpublished Dissertation, Teachers College, Columbia University, Ed.D., 1952.

Thorn, Alice G. "Music in Kindergarten." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 148-149.

Thorndike, E. L. "Experiments in Euphony." Psychol. Bull., 31 (1934), 679-680.

Thorpe, L. P. "Learning Theory and Music Teaching." In Nelson B. Henry (Ed.), Basic Concepts in Music Education. Fifty-seventh Yearbook of the National Society for the Study of Education, Part I. Chicago: Univ. of Chicago Press, 1958, pp. 163-194.

Thorpe, L. P. "The Orchestral Type Preferences of Students." J. Appl. Psychol., 20 (1936), 778-784.

Thrall, Bruce E. "The Audibility of Twelve-Tone Serial Structures." Unpublished Master's Thesis, The Ohio State University, 1962 (M.A.).

Thurlow, Willard R. "Binaural Interaction and the Perception of Pitch." J. of Exper. Psychol., 32 (1943), 17-35.

_____. "Binaural Interaction and the Nature of Pitch Perception." Psychol. Bull., 59 (1942), 503.

_____. "The Perception of the Pitch of High Frequencies." Amer. Psychologist, 1 (1946), 255.

_____, and S. Bernstein. "Simultaneous Two-Tone Pitch Discrimination." J. Acoust. Soc. Amer., 29 (1957), 515-519.

Tiffin, Joseph. "The Role of Pitch and Intensity in the Vocal Vibrato of Students and Artists." Univ. of Iowa Stud.: Stud. in the Psychol. of Music, 1 (1932), 134-165.

Tilson, Lowell M. "Can the Ability to Appreciate Music be Measured Objectively?" Teachers College J., 2:3 (January, 1931), 79-82.

_____. "Follow up Study of Graduates from the Four Year Music Supervisors Course." School Music, 34, May 1934 and 33-34.

_____. "A Study of the Predictive Value of Music Talent Tests for Teacher-Training Purposes." Teachers College J., 3 (1931), 101-129.

Timm, Everett L. "Training Requirements of Musical Careers." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1948, (Ph.D.). (Micro card No. UR 531).

Timothy, Gilbert E. "A Survey of Choral Techniques in Selected High Schools." Unpublished Project Report, University of Oregon, 1959, (M.M.E.).

Tinkham, R. R. J. "Isolation of Sound in Buildings." Architect. Record, 99 (May, 1946), 114-117.

Tipton, Eleanor L. "A Listening Program of Instrumental Music for the Elementary Schools." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 63-2295; D.A. Vol. 24, p. 772).

Tipton, Gladys. "For Better Classroom Music...In-Service Education." National Elementary Principal, 39:3 (December, 1959), 16-19.

Tischler, Hans. "The Teaching of Music Appreciation." J. Res. Music Educ., 7 (Fall, 1959), 169-173.

Tovell, Martha L. "Teacher Training in Public School Music." Peabody Bull., 30:2 (1934), 38-42.

Towey, Mary Felicia (Sister Mary Joseph). "A Study Incorporating Resource Units in Music as a Correlating Factor in a General Education Program Emphasizing Personality Development and Social Sensitivity in the Growth of Junior High School Pupils." Unpublished Doctoral Dissertation, University of Washington, 1952, (Ph.D.).

Tresselt, M. E. "Time Errors in Successive Comparison of Tonal Pitch." Amer. J. Psychol, 61 (1948), 335-342.

Trimingham, Ann. "Trends in Vocal Music in Elementary Schools." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 293-297.

Trongone, Joseph A. "The Music Teacher and Child Psychology." Music Educ. J., 33:3 (January, 1947), 14-15.

Trosper, Orville W. "The Principles and Practice of Producing Vibrato in Brass Instrument Performance." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 62-4926; D.A. Vol. 23, p. 2452).

Troup, George. "The Challenge of High School Music Teachers." Music Educ. J., 31 (April, 1945), 20.

Truitt, Austin H. "An Analysis of Music Education in Three New York State Cities." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1953, (Ph.D.).

Trusler, Milton S. "The Musical Education of Elementary Classroom Teachers: A Survey and Appraisal of the Musical Preparation of Elementary Teachers in Arkansas." Unpublished Doctoral Dissertation, Indiana University, 1957, (Ph.D.). (Univ. Micro. No. 22-712; D.A. Vol. 18, p. 250).

Tucker, John H. "Music Offerings in the Public Secondary Schools of Northeastern Ohio." Unpublished Doctoral Dissertation, Western Reserve University, 1962, (Ph.D.).

Turk, W. "Duration Thresholds for Pitch Perception." J. Acoust. Soc. Amer., 13 (1941), 66.

Turner, William M. "A Follow-up Study of Music Education at North Texas State College." Unpublished Doctoral Dissertation, North Texas State College, 1959, (Ed.D.). (Univ. Micro. No. 59-5964; D.A. Vol. 20, p. 2840).

Turrentine, Edgar M. "Predicting Success in Practice Teaching in Music." Unpublished Doctoral Dissertation, State University of Iowa, 1962, (Ph.D.). (Univ. Micro. No. 63-980; D.A. Vol. 23, p. 2814).

Tyler, L. E. "An Exploratory Study of Discrimination of Composer Style." J. Gen. Psychol., 34 (1946), 153-163.

Tyler, Ralph W. "Functions of Graduate Departments and Schools of Education." In Nelson B. Henry (Ed.), Graduate Study in Education, Fiftieth Yearbook of the National Society for the Study of Education, Part I. Chicago: Univ. of Chicago Press, 1951, p. 10.

Uhl, W. L. "Contributions of Research to Special Methods in Music and Art." In Guy M. Whipple (Ed.). The Scientific Movement in Education, Thirty-seventh Yearbook of the National Society for the Study of Education, Part II. Bloomington, Ill.: Public School Pub. Co., 1938, pp. 171-178.

Ullman, Marguerite, and Violet Lannert. "Why Henry Was a Good Music Reader." Music Educ. J., 33:3 (January, 1947), 22-24.

UNESCO. International Conference on the Role and Place of Music in the Education of Youth and Adults. New York: Columbia University Press, 1955.

University of Minnesota. "A Radio Course in Music Appreciation." Bull. Univ. of Minn., 35:54 (1932).

Upton, M. "A Study of the 'Time Error' in the Judgment of Sound Intensities with Short Intervals of Separation of Two Stimuli." Psychol. Bull., 33 (1936), 793-794.

_____., and A. H. Holway. "On the Psychophysics of Hearing." I. Monaural Differential Sensitivity and Exposure-time." Proc. Nat. Acad. Sci., 23 (1937), 29-32.

_____. "On the Psychophysics of Hearing." II. Binaural Differential Sensitivity and Exposure-time." Proc. Nat. Acad. Sci., 23 (1937), 32-34.

Utgaard, Merton B. "The Construction and the Validation of a Test Designed to Measure the Degree of Preparedness for Entrance into the Senior High School Select Band." Unpublished Doctoral Dissertation, Colorado State College of Education, 1950, (Ed.D.).

Van Alstyne, D., and E. Osborne. "Rhythmic Responses of Negro and White Children Two to Six: With a Special Focus on Regulated and Free Rhythm Situations." Monog. Soc. Res. Child Develpm., 2:4 (1937).

Van Bodegraven, Paul. "Music Reading." Music Educ. J., 35 (February-March, 1949), 71-72.

_____. "Equality of Opportunity in Music Education." Music Educ. J., 39:1 (September-October, 1952), 20-21.

Van Cleave, Emerson. The All-County, or the All-City Elementary School Music Festival. Montgomery, Ala.: State of Ala., Dept. Educ., 1955. (Mimeographed).

Van Nuys, Kelvin, and E. Weaver. "Memory Span and Visual Pauses in Reading Rhythms and Melodies." Psych. Monogr., 55:1 (1943), 33-50.

Varnum, Carolyn. "General Music in the Junior High School." Unpublished Master's Thesis, Woman's College of University of North Carolina, 1962, (M.Ed.).

Varro, Margit. "The Musical Receptivity of the Child and the Adolescent." Proc. of the Music Teach. Nat. Ass., 1943, 77-88.

_____. "Personality Problems of the Music Student." In E. G. Gilliland (Ed.), Music Therapy 1951. Lawrence, Kansas: The National Association for Music Therapy, Inc., 1952, pp. 141-151.

Vassallo, Charles L. "Instrumental Music in the High School Curriculum." Unpublished Professional Paper, Sam Houston State Teachers College, 1947, (M.A.).

Vernon, P. E. "Auditory Perception I. The Gestalt Approach. II. The Evolutionary Approach." Brit. J. Psychol., 25 (1934), 123-139; 25 (1935), 265-283.

_____. "The Phenomena of Attention and Visualization in the Psychology of Musical Appreciation." Brit. J. Psychol., 21 (1930), 50-63.

Verveer, E. M. et al.. "Change in Affectivity with Repetition." Amer. J. Psychol., 45 (1933), 130-134.

Viggiano, F. Anthony. "The Production of Musical Programs in Senior High School, The Administrative, Production, and Psychology of Effective Musical Performance." Unpublished Doctoral Dissertation, New York University, 1942, (Ed.D.).

Vincent, Mabel A. "A Survey and Evaluation of the Junior High School Vocal Situation in the Schools of the State of Florida." Unpublished Master's Thesis, Florida State University, 1954, (M.M.E.).

Von der Heide, Henry. "The Orchestra in the Senior High School." In Wayne S. Hertz (Ed.), Music in the Senior High School, Washington, D.C.: Music Educators National Conference, 55-63.

Vroman, Clyde. "A Basis for Selecting the Content of the Curriculum for the Training of Teachers of Music in the University of Michigan." Unpublished Doctoral Dissertation, University of Michigan, 1942, (Ph.D.).

Wagner, Carlotta C. "An Experimental Study in Economy of Learning Piano-forte Playing with Reference to the Theory of Formal Discipline and Transfer of Training." Unpublished Doctoral Dissertation, University of Southern California, 1931, (Ph.D.).

Wagner, E. "Teaching Music Fundamentals with Piano." Am. Mus. Teach. 8 (September-October, 1958), 5.

Wagner, Howard O. "A Study of the General Music Program of Selected Secondary Schools Located in Seven Central Ohio Counties." Unpublished Master's Thesis, Ohio State University, 1960, (M.A.).

Wall, Elsie G. "Problems of the Choral Conductor in Secondary Schools." Unpublished Master's Thesis, University of Southern California, 1939, (M.M.).

Wall, Halmer C. "Teaching Materials and Procedures for Helping High School Students to Understand the Relationship of Adjudication and Vocal Performance with Music Festivals as an Important Resource." Unpublished Project Report, Teachers College, Columbia University, 1953, (Ed.D.).

Wallach, M. A. "Two Correlates of Symbolic Sexual Arousal: Level of Anxiety and Liking for Esthetic Material." J. Abnorm. Soc. Psychol., 61:3 (November, 1960), 396-401.

Wallis, Robert B. "Appreciation Through Performance." Educ. Music Magazine, 3 (March-April, 1938), 13-15.

_____. "Appreciation Through Performance--a Reprise." Education, 76:7 (1956), 445-448.

_____. "Music in Life Adjustment Education." In Franklin R. Zeran (Ed.). Life Adjustment Education in Action.

Waln, George. "Acoustics of the Music Room." Educ. Music Magazine, (January-February, 1938), 8-9.

Walsh, Mildred L. "In-Service Music Education and Materials for Elementary Teachers." Unpublished Master's Thesis, Leland Stanford Junior University, 1948, (M.A.).

Ward, Sylvan D. "The Use of Music in the Language Arts Program at the Kindergarten and Primary Grade Levels." Unpublished Doctoral Dissertation, Chicago Musical College, 1954, (D.M.E.).

Warmack, Donald L. "Eighteenth Century String Chamber Music, Selected for Use in the Training of School Instrumentalists." Unpublished Doctoral Dissertation, University of Southern California, 1960, (D.M.A.). (Univ. Micro. No. 60-1316; D.A. Vol. 20, 4681).

Warren, Fred. "An Investigation of Music in the Adult Education Programs of the Public Junior College." Unpublished Doctoral Dissertation, University of California at Los Angeles, 1958, (Ed.D.).

Waterman, C. Robert. "Planning for Music Rooms and Buildings." Unpublished Doctoral Dissertation, University of Wyoming, 1955, (Ed.D.).

Watson, Jack M. The Education of School Music Teachers for Community Music Leadership, Contributions to Education. New York: Bureau of Pub., Columbia Univ., 1948.

_____. "Objectives of Doctoral Study in Music Education." Amer. Music Teachers, 5 (March-April, 1956), 6.

_____. "Using Phonograph Records to Teach Music." Nat. Elementary Principal, 39:3 (December, 1959), 37-40.

Watters, Leslie. "Parents' Appraisal of Extra Curricular Activities." Unpublished Doctoral Dissertation, University of Pittsburgh, 1947, (Ph.D.).

Waugh, Harvey. "A Case for School Use of Secular Music." Gopher Music Notes, 16 (1960), 8-10.

Wayman, Robert M. "Appraisal of the Extracurricular Program of Secondary Schools, Made by Alumni in the Light of Their Present Community Leisure-time Interests." Unpublished Doctoral Dissertation, University of Pittsburgh, 1942, (Ed.D.).

Weaver, H. E. "Studies of Ocular Behavior in Music Reading." Psychol. Monogr., 55:1 (1943).

Weaver, P. J. "Report on Music in Higher Education." In Yearbook of the Music Educators National Conference, 1938. Chicago: The Conference, 1938, pp. 138-139.

Webb, Karl E. "Qualifications of Entering Freshmen in Music Education." Unpublished Professional Paper for the National Association of Schools of Music, 1962.

Weber, Joseph. "Mechanics and Music." In Karl W. Gehrkens (Ed.), Proceedings of the Music Teachers National Association, Twenty-fifth Series, 1930. Oberlin, O.: The Association, 1931, 209-217.

Weeks, George D. "The Selection of Elementary Instrumental Music Students." Unpublished Project Report, Teachers College, Columbia University, 1942, (Ed.D.).

Weerts, Richard. "The Interpretations of Selected Solo Literature for the Clarinet Through the Use of Recordings." Unpublished Project Report, Teachers College, Columbia University, 1960, (Ed.D.).

Wegner, H. C. "Financing the School Band." Music Supervisors J., 19 (March, 1933), 53.

Wehner, Walter L. "The Effect of Interior Shape and Size of Clarinet Mouthpieces on Intonation and Tone Quality." Unpublished Doctoral Dissertation, University of Kansas, 1961 (Ed.D.).

Wehner, Walter L. "The Relation of Values to Music." Oklahoma Teacher, (September, 1963), 25-27.

Weigand, J. J. "The Scientific Approach to Music Teaching; A Report on Some of the Results and Applications of Research in Music Education." Music Educ. J., 33:2 (1946), 32-34; 33:3 (1946), 46-49.

Weil, LeRoy. "Financing a Program of School Music. Kentucky School J., 29 (May, 1951), 26.

_____. "A Study of the Personnel and Facilities Offered in the Teaching of Music Education in the Senior Colleges and Universities of North Carolina." Unpublished Doctoral Dissertation, University of North Carolina, 1950, (Ph.D.).

Weinberg, Rita M. "Musical Preferences of College Students." Amer. Psychologist, 3 (1948), 356.

Weiss, Deso A., M.D. "The Pubertal Change of the Human Voice: Mutation." Folia Phoniat., 2 (1950), 126-159.

Weiss, William M. "A Study and Evaluation of the Music Programs in the Seven Public High Schools of Newark, New Jersey." Unpublished Doctoral Dissertation, New York University, 1956, (Ed.D.). (Univ. Micro. No. 17-681; D.A. Vol. 17, p. 2902).

Wells, A. "A Comparison of Chord Figures and Scale Progressions in Early School Music Learning." Peabody Bull., 30:1 (1933), 21-23.

Wenck, Maude H. "Effective Music Experiences for the Prospective Elementary Classroom Teacher in the State Teachers College in Moorhead, Minnesota." Unpublished Project Report, Teachers College, Columbia University, 1953, (Ed.D.).

Wesler, Warren A. "Parent and Faculty Opinion Regarding the Music Program in the Truro Local School District." Unpublished Master's Thesis, The Ohio State University, 1955, (M.A.).

Westerman, Kenneth W. "Dynamic Phonetics and Their Use in Voice Training Classes." In Yearbook of the Music Educators National Conference, 1936. Chicago: The Conference, 1936, pp. 211-214.

Weyland, Rudolph H. "The Effects of a Workshop on Certain Fourth-grade Teachers' Skills in Teaching Music Reading." Unpublished Doctoral Dissertation, University of California, 1955, (Ed.D.). (U.C. Microfilm No. Cu1846).

Whalen, M. A. "Music in an Activity Program." Education, 56 (1936), 535-537.

Wheatley, Luis A., and F. C. Sumner. "Measurement of Neurotic Tendency in Negro Students of Music." J. Psychol., 22 (1946), 247-252.

Wheeler, Lester R. and Viola D. Wheeler. "Intelligence of Music Students." J. of Educ. Psychol., 42 (April, 1951), 223-30.

Wheeler, William D. "Suggestions for the Improvement of Professional Laboratory experiences in Music for the Prospective Music Teacher at Florida State A. and M. University." Unpublished Project Report, Teachers College, Columbia University, 1957, (Ed.D.).

Wheelwright, Lorin. "Music Reading in the Elementary School." Education, 59 (May, 1939), 533-544.

Whistler, Harvey S., and Louis P. Thorpe. "Testing for Musical Talent." Educ. Music Magazine, 31 (March, 1952), 16-17.

Whitcomb, Mervin W. "Analysis of Pupils' Likes and Dislikes of Music at the Junior High School Level." Unpublished Master's Thesis, Boston University, 1947, (M.Ed.).

_____. "Teaching Music Structure in Terms of Total Musical Growth." Unpublished Project Report, Teachers College, Columbia University, 1952, (Ed.D.).

White, Adolph. "Aliferis Music Achievement Test as a Predictor of Success in Music Theory at St. Olaf College." J. Educ. Res. 54 (April, 1961), 315-317.

White, Benjamin W. "Recognition of Distorted Melodies." Amer. J. Psychol., 73 (March, 1960), 100-107.

White, Eric W. "Some Physical Attributes of Music." Life and Letters Today, 25:32 (April, 1940), 66-70.

White, Howard G. "The Historical Development of the Occupation of Music Teaching." Unpublished Professional Paper, Eastern New Mexico University, 1961. (Mimeographed).

_____. "A Study of the Attitudes of Music Alumni of Eastern New Mexico University Toward Their College Training." Mimeographed Report, Eastern New Mexico University, 1964.

_____. "Survey of Research Interests of New Mexico Music Educators." Mimeographed Report, Eastern New Mexico University, 1962.

Whitehead, Elizabeth N. "A Diagnostic Survey of Musical Interests and Attitudes." Unpublished Master's Thesis, Northwestern University, 1949, (M.M.).

Whitley, Paul L. "The Influence of Music on Memory." J. Gen. Psychol., 10 (1934), 137-161.

Whitlock, John B. "A Study of the Music Education Program at the State University of Iowa During the Academic Years 1955-1957." Unpublished Doctoral Dissertation, State University of Iowa, 1958, (Ph.D.). (Univ. Micro. No. 58-5873; D.A. Vol. 19, p. 1782).

Whitlow, Cyril M. "Attitudes and Behavior of High School Students." Unpublished Field Study Report (No. 3), Colorado State College of Education, 1933, (Ph.D.).

Whitlow, Cyril. "The High School Graduate and His School." Unpublished Field Study Report (No. 1), Colorado State College, 1931, (Ph.D.).

_____. "The Smaller High Schools of Colorado." Unpublished Field Study Report (No. 2), Colorado State College, Dept. of Ed., 1933, (Ph.D.).

Whittington, R.W.T. "The Assessment of Potential Musical Ability in Secondary School Children." J. Educ. Psychol., 48:1 (January, 1957), 1-10.

Whitworth, James R. "A Cinefluorographic Investigation of the Supralaryngeal Adjustments in the Male Voice Accompanying the Singing of Low Tones and High Tones." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-5622; D.A. Vol. 22, p. 2824).

Whitworth, W. Lavoy. "A Study of the Effect of Intelligence and Environment on Choir Membership." Unpublished Master's Thesis, University of Texas, 1958, (M.M.).

Whybrew, William E. "The Adjudicator as Educator." Instrumentalist, 13:9 (1959), 53-91.

_____. "Bandmaster or Music Educator?" Instrumentalist, 15:3 (November, 1960), 36-37.

Whybrew, William E. "Transcriptions for Musicianship." Instrumentalist, 14:5 (1960), 30-32.

_____. "Understanding Thru Performance." Instrumentalist, 16:10 (June, 1962), 40-41.

Wiebe, G. D. "Music in General Education." Unpublished Doctoral Dissertation, The Ohio State University, 1941, (Ph.D.).

_____. "Radio Listening and Popular Song Taste." Evaluation of School Broadcasts Bulletin, No. 28, The Ohio State University, 194.

_____. "Students' Voluntary Radio Program Choices." In Theodore M. Finney (Ed.), Proceedings of the Music Teachers National Association: Thirty-fifth Series, 1940. Pittsburgh, Pa.: The Association, 1941, 411-420.

_____. "Wellsprings of Music: An Evaluation of the Tuesday Series of the School of the Air of the Americas, 1940-41." Evaluation of School Broadcasts,Bull. No. 29. Columbus: The Ohio State University, 1941.

_____., and C. F. Church, Jr. "Educational Music Broadcasts of 1941: A Descriptive Analysis and Some Recommendations." Evaluation of School Broadcasts, Bull. No. 45. Columbus: The Ohio State University, 1942. (Mimeographed).

Wilhowsky, Peter J. "Music, A Report on the Program in the New York City Schools With Some Observations as to its Aims, Activities, and Achievements." New York: The City of New York, Board of Education, 1960.

Willett, William C. "Flutes or Clarinets." Music Educ. J., 37 (June-July, 1951), 35.

_____. "An Outsider's View from Within: A New Yorker's View of Public School Music in the State of California." New York State School Music News, (October, 1962), 24-27.

Willey, George A. "The Visualization of Music on Television, with Emphasis on The Standard Hour." Unpublished Doctoral Dissertation, Stanford University, 1956, (Ph.D.). (Univ. Micro. No. 57-704; D.A. Vol. 17, 440).

Willheim, Imanuel. "A Structural Approach to Musical Understanding." Music Educ. J., 39 (June, 1953), 38-39.

Willhoite, Earl. "The Improvement of Radio Presentations of School Choral Groups." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1951, (Ed.D.).

Williams, H. M. "The Child and Music." Childhood Education, 10:5 (1934), 254-256.

_____. "The Measurement of Musical Development: Part I. Techniques of Measurement in the Developmental Psychology of Music." Univ. of Iowa Stu. in Child Welfare, 7:1 (1932), 11-31.

_____. "The Measurement of Musical Development: I. Studies in the Measurement of Musical Development." Univ. of Iowa Studies in Child Welfare, 7:1 (1932), 12-107.

_____. "The Measurement of Musical Development: Part Ia. Studies in the Rhythmic Performance of Pre-school Children." Univ. Iowa Stu. in Child Welfare, 7:1 (1932), 32-66.

_____. "The Measurement of Musical Development: Part Ib. Studies of Vocal Control of Pitch of Pre-school Children." Univ. Iowa Stu. in Child Welfare, 7:1 (1932), 67-91.

Williams, Harold M. "The Measurement of Musical Development: Part Ic. Problems in Developmental Psychology of Music." Univ. Iowa Stu. in Child Welfare, 7:1 (1932), 92-108.

Williams, Jean Parks. "Correlating Vocal Music with Social Studies." Unpublished Master's Thesis, The Ohio State University, 1954, (M.A.).

Williams, Prince Amhed. "Basic Music for the Single Curriculum." Unpublished Doctoral Dissertation, New York University, 1946, (Ed.D.). (Univ. Micro. No. 818; D.A. Vol. 7, p. 73).

Williams, Thomas W. "Influence of General Education on Music Curricula." In Theodore M. Finney (Ed.) Proceedings of the Music Teachers National Association: Forty-second Series, 1950. Pittsburgh, Pa.: The Association, 1951, 80-84.

Williams, Thomas B. "A Study of the Effect of Music as a Distractor on the Mental Test Performance of Certain Eleventh Grade Students." Unpublished Doctoral Dissertation, Temple University, 1961, (Ed.D.). (Univ. Micro. No. 61-2728).

Williamson, C. "Recent Advances in Acoustics and Their Application to the Psychology of Music." In Proceedings of the Music Teachers National Association, 1937. Oberlin, O.: 1938, pp. 62-66.

Williamson, Mary E. "The Place of Music in the Lives of Sixth Grade Children." Unpublished Master's Thesis, The Ohio State University, 1950, (M.A.).

Willsmott, John M. "High School Boys Electing Industrial Arts: A Study of Certain Factors Differentiating the Industrial Arts Group from the Group Not Electing Industrial Arts." Unpublished Doctoral Dissertation, Columbia University, 1941, (Ph.D.).

Wills, Godfrey W. "Problems in Direction and Presentation of Operettas in High School." Unpublished Project Report, Teachers College, Columbia University, 1957, (Ed.D.).

Wilson, A. Verne. "Why Music Education?" Nat. Elementary Principal, 39:3 (December, 1959), 6-10.

Wilson, Emmett. "The Prognostic Value for Music Success of Several Types of Tests." Music Supervisors J., 16 (February, 1930), 63-100.

Wilson, George H. "A Study of Professional Music Education at The Ohio State University." Unpublished Doctoral Dissertation, The Ohio State University, 1958, (Ph.D.). (Univ. Micro. No. 58-2647; D.A. Vol. 19, p. 277).

Wilson, Harry R. "The Training of Teachers of Music in Rural Schools of the U.S.A." In Music in Education. Paris: United Nations Educational Scientific and Cultural Organization, 1955, pp. 275-278.

Winslow, Robert W. "Male Vocal Problems in the Secondary School." Music Educ. J., 32 (March, 1946), 58-61.

_____. "Music Education for Rural Teachers." Educ. Music Magazine, 24:2 (November, 1944), 43.

Winter, James H. "Brass Clinic: Right Hand in Horn Playing." Instrumentalist, 38 (May, 1955), 40.

Wisenall, E. J. "Singing during Adolescence." Music Supervisors J., 16 (March, 1930), 49.

Wisler, Gene C. "A Study of the Elementary Music Curricula in the Elementary Schools in District III of the State of Idaho." Unpublished Doctoral Dissertation, University of Oregon, 1957, Ed.D. (Univ. Micro. No. 20-204; D.A. Vol. 17, p. 1962).

Woelflin, Leslie E. "An Experimental Study on the Teaching of Clarinet Fingerings with Teaching Machines." Unpublished Doctoral Dissertation, Southern Illinois University, 1961, (Ph.D.). (Univ. Micro. No. 62-1572; D.A. Vol. 23, p. 650).

Wolff, Robert D. "Opera Workshop as an Integral Part of the Arlington Heights, Illinois High School Curriculum." Unpublished Project Report, Teachers College, Columbia University, 1961, (Ed.D.).

Womack, Darwin Wasson. "A Study of Factors Involved in Establishing a Satisfactory Acoustic Environment in the Classroom." Unpublished Doctoral Dissertation, University of Tennessee, 1962 (Ed.D.).

Woodbury, Ward L., Jr. "Psychology of Leadership in Orchestral Conducting." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1954, (Ph.D.).

Woodrow, Herbert. "The Reproduction of Temporal Intervals." J. Exp. Psychol., 13 (1930), 473-499.

Woods, Roy C., and Lureata R. Martin. "Testing in Musical Education." Educ. Psychol. Measmt., 3 (Spring, 1943), 29-42.

Woodward, J. G. "Resonance Characteristics of a Cornet." J. Acoust. Soc. Amer., 13 (1941), 156-159.

Woodridge, Warren B. "The Nasal Resonance Factor in the Sustained Vowel Tone in the Singing Voice." Unpublished Doctoral Dissertation, Indiana University, 1954, (Ph.D.). (Univ. Micro. No. A54-3114; D.A. Vol. 14, p. 2089).

Woollatt, Lorne H. The Cost-Quality Relationship on the Growing Edge. New York: Bureau of Publications, Columbia University, 1949

Worrel, John "An Evaluation of Teacher Preparation in Music Education at the University of Kentucky Through an Analysis of the Opinions of Graduates." Unpublished Doctoral Dissertation, University of Illinois, 1957, (Ed.D.). (Univ. Micro. No. 25-313; D.A. Vol. 18, p. 1064).

Wortman, Robert L. "The Role of the Liberal Arts in the Training of Stringed Instrument Orchestral Players." Unpublished Doctoral Dissertation, Florida State University, 1961, (Ph.D.).

Wray, Robert P. "Three Controlled Experiments on the Value of Technical Analysis in Teaching Appreciation of Poetry and Music." In Practical Values of Educational Research, Official Report of 1938 Meeting, American Educational Research Association. Washington: Nat. Educ. Ass., 1938, pp. 48-50.

Wright, Al G. "Housing the School Music Department." Music Educ. J., 37 (April-May, 1951), 20.

Wright, Ralph. "The Boy Voice Problem in the Junior High School." In Yearbook of the Music Supervisors National Conference, 1933. Chicago: The Conference, 1933, pp. 123-125.

_____. "Junior High School Choir and Chorus Problems." In Yearbook of the Music Supervisors National Conference, 1932. Chicago: The Conference, 1932, pp. 133-135.

Wulfing, Gretchen. "The Implications of the Major Educational Principle for Supervision and the Direction of Instruction." Calif. J. Elem. Educ., 8:3 (February, 1940), 151-158.

Wunderlich, H. "Theory of Tonality." J. Gen. Psychol., 37 (October, 1947), 169-176.

_____. "Psychology of the Esthetic Object." Amer. Psychologist, 4, (1949, 265.

_____. "Recognition Value of Diatonic Intervals." Unpublished Doctoral Dissertation, University of Texas, 1937, (Ph.D.).

Wurtz, Martha. "Music for the Academically Talented High School Student." Mo. J. Res. Music Educ., 1:1 (1962), 25.

Wyatt, R. F. "A New Instrument for Measuring Pitch Discrimination." Amer. J. Psychol., 48 (April, 1936), 335-341.

Yarustovsky, Boris. "Journey to America." J. Res. Music Educ., 10 (Fall, 1962), 121-128.

Yaw, Perry H., Jr. "An Appraisal of the Music Program for Elementary Teachers at State University Teachers College, Potsdam, New York." Unpublished Project Report, Teachers College, Columbia University, 1955, (Ed.D.).

Yingling, Robert W. "Music in American Public Education with Special Regard to the Needs of Prospective Musicians." Unpublished Doctoral Dissertation, Harvard University, 1948, (Ed.D.).

Yochim, Ralph. "Current Practices in the Scheduling of Instrumental Music in the Chicago Public High Schools." Unpublished Doctoral Dissertation, Chicago Musical College, 1955, (D.M.E.).

Yokum, George E. "The Place of General Music Activities in the Vocational-Technical and the Vocational Trade and Industrial Schools of the United States." Unpublished Project Report, Teachers College, Columbia University, 1950, (Ed.D.).

Youcis, Harold J. "A Comparative Study of Curricula Standards for Training the School Instrumental Teacher." Unpublished Doctoral Dissertation, Indiana University, 1960, (Ed.D.). (Univ. Micro. No. 60-6073; D.A. Vol. 21, p. 2619).

Young, Betty B. "The Musical Background of Beginning First Graders in the Public Schools." Unpublished Master's Thesis, The Ohio State University, 1962, (M.A.).

Young, R. W., and J. C. Webster. "Some Factors Affecting the Intonation of a Clarinet." J. Acoust. Soc. Amer., 31 (1959), 839.

_____., and Robert S. Gales. "Acoustics of School Music Rehearsal Rooms." J. Acoust. Soc. Amer., 28:4 (1956), 791.

Young, Robert Y. "Intonation of an Alto and A Tenor Saxophone." J. Acoust. Soc. Amer., 31 (1959), 1565.

Youngblood, Joseph E. Music and Language: Some Related Analytical Techniques. Ann Arbor: Univ. Microfilm, Inc., 1960. (Univ. Micro. No. 60-6336; D.A. Vol. 21, p. 2743).

Zanzig, Augustus. "The Place of the Public School in the Music of the Community." Oberlin, O.: The Association, 1931, pp. 77-86.

Zimmer, Albert A. "National Survey of the Music Education Program in Secondary Schools." Unpublished Doctoral Dissertation, University of Pittsburgh, 1951, (Ph.D.).

Zimmerman, C. Robert. "Relationship of Musical Environment to Choral Sight Reading Ability." Unpublished Doctoral Dissertation, University of Oregon, 1962, (Ed.D.). (Univ. Micro. No. 63-2390).

Zimmerman, Kenneth E. "A Study of the Techniques and Materials for Presentation in Listening Projects in General Music Classes." Unpublished Master's Thesis, The Ohio State University, 1961, (M.A.).

Zimmerman, Rosa Evelyn. "A Study of the Present-Day Conception of the Function of Music in the Curriculum from the Standpoint of the Administrator." Unpublished Master's Thesis, University of Washington, 1935, (M.M.).

Addenda

Carter, Elwyn, and Albert Smith. Music Skills and Competencies. Kalamazoo: Western Mich. Univ. Press, 1959.

Chidester, Lawrence W., and Arnold M. Small. "The Preparatory Instruments, Part II: Some Scientific Aspects." Music Edu. J. 26:6 (May, 1940), 16-17.

Christ, William B. "The Reading of Rhythm Notation Approached Experimentally According to Techniques and Principles of Word Reading." Unpublished Doctoral Dissertation, Indiana University, 1953, (Ph.D.). (Univ. Micro. No. A54-986; D.A. Vol. 14, p. 684).

Rivlin, Harry N. "The Personality Problems of Teachers." Mental Hygiene, 23 (1939), 12-24.

Rubin-Rabson, Grace. "Studies in the Psychology of Memorizing Piano Music. V: A Comparison of Pre-study Periods of Varied Length." J. Educ. Psychol., 32 (1941), 101-112.

Whybrew, William E. "A Basic Course in Arranging for School Orchestras." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1953, (Ph.D.).

_____. "The Singing Approach to Playing the Brasses." The Instrumentalist, 11:2 (1956), 22-25.

_____. "Musicianship for Musical Standards." Music Educ. J., 43:4 (1957), 60-64.

_____. "Concerning Attack and Release." The Instrumentalist, 12:1 (1957), 89.

_____. "Common Performance Problems." Instrumentalist, 13:6 (1959), 25-28.

A. In terms of the project's definition, the subjects for research in music education are children attending public schools in the United States. The following studies involved children in other countries and, therefore, were considered not relevant.

Burroughs, G.E.R., and J. N. Morris. "Factors Involved in Learning a Simple Musical Theme." Brit. J. Educ. Psychol., 32:1 (1962), 18-28.

Happold, F. C. "Examination in Music: Experiment at "O" Level." Music Teacher, 31 (March, 1952), 140.

McKellar, R., and R. Harris. "Radio Preferences of Adolescents and Children." Brit. J. Educ. Psychol., 22 (1952), 101-113.

Mainwaring, James. "Cognitive Processes Involved in Musical Ability and in Musical Education." Brit. J. Educ. Psychol., 1 (January, 1931), 180-203.

_____. "Experiments on the Analysis of Cognitive Processes Involved in Musical Ability and Musical Education." Brit. J. Educ. Psychol., 1 (1931), 180-203.

_____. "Kinaesthetic Factors in the Recall of Musical Experience." Brit. J. Psychol., 23 (1933), 284-307.

_____. "The Meaning of Musicianship: A Problem in the Teaching of Music." Brit. J. Educ. Psychol., 11 (1941), 205-214.

_____. "Psychological Factors in the Teaching of Music. (Part I), Applied Musicianship (Part II)." Brit. J. Educ. Psychol., 21 (1951), 105-121; 21 (1951), 199-213.

Parthasarathy, K. "Musical Aptitude and Appreciation Among High School Students." J. of Psychol. Res., Mysore, 1:2 (1957).

Porter, M. M. "Dental Aspects of Orchestral Wind Instrument Playing with Special Reference to the "Embouchure"." British Dental Journal, 93 (1952), 66-73.

Sonninen, Aatto A. The Role of the External Laryngeal Muscles in Length-Adjustment of the Vocal Cords in Singing: An Academic Dissertation. Helsinki: Lahden Kirjapaino-ja Sanomalehti-oy, 1956.

B. The following titles, which suggested a study possibly relevant to music education, proved to be for research in areas other than music.

Bathurst, E. G. "Phonograph Records as an Aid to Learning." J. Educ. Psychol., 34 (1943), 385-406.

Bryant, James H. "Types of Supervisors and Associated Attitudes of Subordinates." Unpublished Doctoral Dissertation, Louisiana State University, 1959, (Ph.D.). (Univ. Micro. No. 59-3070; D.A. Vol. 20, p. 1086).

Carmaechel, Oliver C. "Some Educational Dilemmas." AAUP Bull., 37 (Winter, 1951-52). 630.

Carter, Charles B. "The Relationship Between Children's Drawings and Sensitivity to Environmental Sounds." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1958, (Ed.D.). (Univ. Micro. No. 59-752; D.A. Vol. 19, p. 2849).

Chillrud, Franklin C. "Teacher Education in a Small Liberal Arts College." Unpublished Project Report, Teachers College, Columbia University, 1942, (Ed.D.).

Cieutat, V. J., and C. E. Noble. "Ability vs. Practice in Two Hand Coordination." Percept. Mot. Skills, 8 (1958), 226.

Corey, S. M., and G. S. Berry. "The Effect of Teacher Popularity Upon Attitude Toward School Subjects." J. Educ. Psychol., 29 (1938), 665-670.

Curry, E. Thayer. "Hoarseness and Voice Change in Male Adolescents." J. Speech Hear. Disord., 14 (1949), 23-25.

_____. "An Objective Study of the Pitch Characteristics of the Adolescent Male Voice." Speech Monogr., 7 (1940), 48-62.

Duker, Sam. "Master's Thesis on Learning." J. of Commun., 12:4 (1962), 234-242.

Engelberg, Marvin W. "Auditory Matching as a Procedure in the Classification of Voices." Unpublished Doctoral Dissertation, University of Michigan, 1959, (Ph.D.). (Univ. Micro. No. 59-2111; D.A. Vol. 19, p. 3412).

Fairbanks, G. "An Acoustical Comparison of Vocal Pitch in Seven-and Eight-Year Old Children." Child Develpm., 21 (1950), 121-129.

_____., Herbert and J. Marian Hammond. "An Acoustical Study of Vocal Pitch in Seven- and Eight-Year Old Girls." Child Develpm., 20 (1949), 71-78.

_____., Wiley and Frank M. Lasserman. "An Acoustical Study of Vocal Pitch in Seven- and Eight-Year-Old Boys." Child Develpm., 20 (1949), 63-70.

Farnsworth, Paul R. "Do Scale Constructors use the Method of Equal Appearing Intervals?" Psychol. Bull., 42 (1945), 536.

Grimm, Lester R. "How Cost Influences School Programs." Ill. Teacher, 26:9 (June, 1938), 277-278.

Harriman, P. L. "Auditory Acuity and Success in College Courses." Peabody J. Educ., 11 (July, 1933), 25-31.

Hicks, James A. "The Acquisition of Motor Skill in Young Children." Univ. of Iowa: Studies in Child Welfare, 4:5 (1930), 1-80.

Holy, T. C. "Utilization of School Buildings." In Walter S. Monroe (Ed.), Ency. of Ed. Res., New York: Macmillan Co., 1941, pp. 1115-1121.

Jerome, Eldon K. "Change of Voice in Male Adolescents." Quart. J. Speech, 23:4 (December, 1937), 648-53.

Kinney, Jo Ann Smith. "Temporal Discrimination in Different Types of Auditory Patterns." Unpublished Doctoral Dissertation, The University of Connecticut, 1959, (Ph.D.). (Univ. Micro. No. 59-3841; D.A. Vol. 20, p. 1450).

Lehman, H. C. '"Intellectual' vs. 'physical peak' Performance." Sci. Monthly, 61 (1945), 127-137.

Lorge, Irving, and Raphael D. "Broad Occupational Groupings by Estimated Abilities." Occupations, 21 (1942), 289-295.

Meriam, J. L. "A Critical Survey of 1000 Activities." J. Exper. Educ. 2 (1934), 327-332.

Michael, William B., Earle E. Herrold, and Eugene W. Cryan. "Survey of Student-teacher Relationships." J. Educ. Res., 44 (1951), 657-673.

Miles, Dwight W. "Preferred Rates in Rhythmic Response." J. Gen. Psychol., 16 (1937), 427-469.

Miller, G. A. "The Masking Effectiveness and Annoyance Value of Various Types of Auditory Stimuli." Amer. Psychologist, 1 (1946), 237.

Noll, John D. "The Perceptual Significance of Certain Acoustical Correlates of Consonant Voicing Contrasts." Unpublished Doctoral Dissertation, State University of Iowa, 1960, (Ph.D.). (Univ. Micro. No. 60-5688; D.A. Vol. 21, p. 2044).

Ostwald, P. F. "A Method for the Objective Denotation of the Sound of a Human Voice." J. Psychosom. Res., 4 (1960).

Ostwald, P. F. "Visual Denotation of Human Sounds." Arch. Gen. Psychiat., 3 (August, 1960), 117-121.

Pedrey, C. P. "A Study of Voice Change in Boys between the Ages of Eleven and Sixteen." Speech Monogr., 12 (1945), 30-36.

Peik, W. E., and E. U. Rugg. "The Group Reactions of over 1300 College, University and Teachers College Instructors to 63 Curriculum Proposals Related to the Education of Teachers." J. Exper. Educ., 2 (1934), 317-326.

Pepinsky, Abe. "Contributions of Science to an Appreciation of Music." In Theodore M. Finney (Ed.), Proceedings of the Music Teachers National Association: Thirty-Seventh Series, 1943. Pittsburgh, Pa.: The Association, 1943, 94-112.

Piers, Ellen V., Jacqueline M. Daniels, and John F. Quackenbush. "The Identification of Creativity in Adolescents." J. of Educ. Psychol., (1960), 346-351.

Postman, Leo. "The Time-error in Auditory Perception." Amer. J. Psychol., 58 (1946), 193-219.

Reymert, Martin L., and Miriam Rotman. "Auditory Changes in Children from Ages Ten to Eighteen." J. Genet. Psychol., 68 (1946), 181-187.

Rock, Irvin, and Phinna Englestein. "A Study of Memory for Visual Form." Amer. J. Psych., 72 (1959), 221-229.

Russell, G. Oscar. "First Preliminary X-Ray Consonant Study." J. Acoust. Soc. Amer., 5 (1934), 247-251.

Schonplug, W. and M. Schafer. "Learning and Activation under Acoustic Stimulation." (Retention and Aktivation bei Akustischen Zusatyreizung). Z. Exp. Angrew Psychologie, 9:3 (1962), 452-464.

Seashore, Harold G. "A Review of Schramm's 'Approaches to a Science of Verse'." Univ. Iowa Stud. Psychol. Music, 4 (1936), 377-79.

Shilling, Charles W., Ira A. Everley, and J. D. Harris. "Hearing Tests; An Evaluation." Nav. Med. Bull., 44 (1945), 100-116.

Simpson, J. E. "The Influence of Auditory Stimulation on Aniseikonic Perception: I. A Preliminary Study." J. Psychol., 41 (1956), 235-241.

Smith, E. L., and D. A. Laird. "The Loudness of Auditory Stimuli Which Affect Stomach Contractions in Healthy Human Beings." J. Acous. Soc. Amer., 2 (1932), 94-98.

Statler, Ellsworth S. "An Analysis of Current Secondary-School Standards of State Agencies and Regional Accrediting Association." Unpublished Doctoral Dissertation, The Ohio State University, 1960, (Ph.D.). (Univ. Micro. No. 60-6407; D.A. Vol. 21, p. 2164).

Stewart, Sterling E. "Administrative Problems, Policies and Practices in Public School State and Auditorium Construction, Maintenance and Use." Unpublished Doctoral Dissertation, The University of Nebraska Teachers College, 1959, (Ed.D.). (Univ. Micro. No. 59-6818; D.A. Vol. 20, p. 4020).

Stone, D. R. "A Recorded Auditory Apperception Test as a New Projective Technique." J. Psychol., 29 (1950), 349-353.

Tendler, A. D. "A Preliminary Report on a Test for Emotional Insight." J. Appl. Psychol., 14 (1930), 122-36.

Timbers, V. "The Recreational Interests of Junior High School Boys." Smith Coll. Stud. Soc. Work., 17 (1946), 157-158.

Tomlinson, Loren R. "An Investigation of Factors Related to Professional Understandings in Elementary Education." Unpublished Doctoral Dissertation, The Ohio State University, 1954, (Ph.D.). (Univ. Micro. No. 59-6652; D.A. Vol. 20, p. 2701).

Van Dalen, D. B. "A Differential Analysis of the Play of Junior High School Girls." J. Educ. Res., 43 (1949), 22-31.

Veatch, Jeannette. "An Experimental Study of the Relation of a Program of Specific Creative Activities to Group Acceptance, Emotional Needs, and Academic Achievement." Unpublished Doctoral Dissertation, New York University, 1953, (Ph.D.).

Villa, Alfred L. "Educational Factors that Influence Decisions to Produce Instructional Films." Unpublished Doctoral Dissertation, Boston University, 1960, (Ed.D.). (Univ. Micro. No. 60-5125; D.A. Vol. 21, p. 2640).

Williams, Harold M. "An Audiometric Test for Young Children." Child Developm., 2 (1931), 237-41.

Williams, Harold M. "A Study in the Prediction of Motor Rhythmic Performance of School Children." J. Genet. Psychol., 43 (1933), 377-88.

C. Abstracted and Microfilmed for ERIC.

Baumann, V. H. "Teen-age Music Preference." J. Res. Music Educ., 8 (1960), 75-84.

Chambers, Lawrence B. "A Critical Survey of Unison Octavo Music for Voice Students." Unpublished Master's Thesis, The Ohio State University, 1938, (M.A.).

Elsass, John F. "Evaluation of the Preparation of the Graduates of the Music Department of the University of Texas 1942-1954." Unpublished Doctoral Dissertation, University of Texas, 1956, pp. 299, (Ed.D.).

Hahn, Marcus E. "A Proposed Technique for Investigating the Relationship Between Musical Preferences and Personality Structure." Unpublished Doctoral Dissertation, University of Kansas, 1954, pp. 397, (Ph.D.).

Monosoff, Harris. "Some Personality Correlates of Preference for Simplicity or Complexity in Music." Unpublished Master's Thesis, The Ohio State University, 1954, pp. 72, (M.A.).

Nelson, Alice D. "The Effect of Group Self-Study of Sociometric Ratings (Music)." Unpublished Doctoral Dissertation, Michigan State University, 1951, 261 pp. (Ed.D.).

Williams, Geneva D. "The Effect of Order of Appearance on the Appreciation of Musical Selections." J. Gen. Psychol., 1942 (October), 27:295-310.

Wilson, Harvey L. "A Program for the Revision of the Instrumental Area of the Music Education Curriculum, School of Education, University of Pennsylvania, Based on a Study of the Instrumental Preparation of the Music Generalist and Instrumental Music Specialist." Unpublished Doctoral Dissertation, University of Pennsylvania, 1951, 264 pp., (Ed.D.).

Zack, Melvin L. "The Influence of Socio-Cultural Characteristics on Educational Opportunities in Public School Instrumental Music." J. Exper. Educ., 23 (March, 1955), 209-219.

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APPENDIX C

Number of Additional Studies Listed But Not Reviewed: 1930-1962

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APPENDIX C

Titles Obtained But Not Reviewed: 1930-1962
Frequency Distribution By Categories

The number of titles indicated below as being in music education (Items 1 through 6) are Master's Theses with the following exceptions: (a) twenty-eight titles are published reports, (b) four titles are unpublished faculty research, and (c) eighty-eight titles are doctoral dissertations. Those titles indicated under Category B are a mixture of theses, dissertations, and published reports. It is believed that many of these reports contain information which would be of great value to the teacher as he functions in the teaching-learning process and to others concerned with this process in the schools.

A.	In Music Education*		3946
1.	The Teacher		360
	Personal Factors	7	
	Social Factors	7	
	Education	100	
	Professional Competence	19	
	Not Subcategorized	227	
2.	The Student		317
	Personal Factors	117	
	Social Factors	21	
	Education	19	
	Not Subcategorized	160	
3.	The Teaching-Learning Process		1626
	Transmission of Culture	562	
	Acculturation of Individual	1004	
	Aesthetic Sensitivity	60	
4.	Constraining Factors		478
	Facilities and Equipment	141	
	Organization and Administration	76	
	School and Environment	89	
	Philosophy	100	
	Not Subcategorized	72	
5.	General Programs		643
6.	Other Studies		291
	Biographical and Historical	291	
7.	Other Listings		231
	On Music Education Research		
	Bibliographies		
	Journals		
	Textbooks		

* In terms of definition used in the project.

B. Possibly Related To Music Education		3267
Adult Music Education	18	
Comparative Music Education	56	
Conducting	10	
Instrumental Music	995	
Music With Other Subjects	129	
Music Camps	34	
Performance	53	
Psychology Of Music	1375	
Singing	583	
Stage Fright	14	
C. Not Relevant to Music Education		2660
Acoustics	38	
Atypical Child	294	
Church Music	115	
College Music	366	
Dance	10	
Private Music Teacher	7	
Pre-School Child	67	
Philosophy of Music	16	
Private Schools	2	
Societies (Music)	4	
Sociology	510	
Non-Music	1231	
Grand Total:		9873

APPENDIX D

Studies Not Available: 1930-1962

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APPENDIX D

Studies Not Available: 1930-1962

The titles listed below, while found in the literature or reported by Colleges or Universities, were not available due to the following reasons: (a) study could not be obtained from the holding library or through interlibrary loan services, (b) title listing was found to be insufficient or incorrect and study could not be located, and (c) title was found to refer to research that had not been completed (after contact with author or agency).

A. Study Not Obtainable

"The Academic Fields: Music." In Report of Everett Workshop Cirriculum. Seattle, Washington: Heiden, 1958.

Ackerly, S. S., et al. "Behavior of Groups of School Children of Different Grades in a Permissive Activity." Unpublished Professional Paper, University of Louisville, Dept. of Psychiatry, 1956-57.

Aseltine, John. "A Comparative Study of Certain General Characteristics, School Experience and Late Life Adjustments of Select High School Dropouts." Unpublished Doctoral Dissertation, University of Southern California, 1941.

Attneave, C. L., and A. Connor. "Developmental Trends in Children's Musical Skills and Concepts." Unpublished Professional Paper, Texas Teachers College, 1959-60.

Baab, Esther S. Materials and Equipment for Use in the Elementary School Music Program. Birmingham, Ala.: Alabama State Department of Education, 1959.

Bastion, James G. "The Role of the Music Specialist in Elementary Music Education: A Study of Music Education in Elementary Schools." Unpublished Doctoral Dissertation, Northwestern University, 1955.

Birkendahl, Walter J. "A Study of Certain Means Toward More Effective School String Programs." Unpublished Professional Paper, University of Denver, 1954.

Boynton, Paul M. Current Practices in Connecticut Secondary Schools: Music. Hartford, Conn.: Conn. State Dept. of Educ., Bureau of Youth Services, 1955.

Brockett, E. B. "Survey and Differentiated Music Courses for the Ninth Grade." Unpublished Professional Paper, Joliet Township High School, Joliet, Ill.

Brody, Viola A. "An Experimental Study of the Emergence of the Process Involved in the Production of Song." Unpublished Doctoral Dissertation, University of Michigan, 1947. (Ph.D.).

Brooks, Edith Moreen. "Music in the General School Program, Grades Seven and Eight." Unpublished Master's Thesis, Northwestern University, 1949. (M.M.).

Bryant, Helen. "Choral Rehearsal Problems in Rural Senior High Schools." Unpublished Master's Thesis, Marywood College, 1961.

Bulgin, Lansing W. "Evaluation of Student Teaching in Music." Unpublished Professional Paper, Northeast Missouri State Teachers College, 1958, (Revised in 1960 and 1962).

_____. "Requirements for Music Majors in the Colleges of Indiana." Unpublished Professional Paper, Northeast Missouri State Teachers College, 1951.

Burkett, Edith M. "A Study Toward Stimulating String Interest in the Public Schools." Unpublished Professional Paper, University of Denver, 1957.

Carpenter, Richard. "Small Group Instruction to Intermediate and Advanced Piano Students in Teachers College, Columbia University." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1952. (Ed.D.).

Carter, Carl S. "A Consideration of Method in Instrumental Music in American Public Schools." Unpublished Doctoral Dissertation, University of Wisconsin, 1937. (Ph.D.).

Christensen, Lorn E. "An Analysis of the Problems of Junior High School Music Teachers." Unpublished Doctoral Dissertation, University of Southern California, 1953. (Ed.D.).

Denver, Colorado Public Schools, Dept. of Research and Curriculum. "Reports of City-Wide Curriculum Tests Given: Jan., May, Sept., 1929, Jan., May, Spet., 1930." 1930.

Deri, Otto. "Musical Taste and Personality." Unpublished Master's Thesis, Columbia University, 1947. (M.A.).

Dickson, Sue. "The Place of Vocal Music in the Junior High School." Unpublished Master's Thesis, Northwestern University, 1950. (M.M.).

Dorsey, James E. "Music and Music Education in the Negro College." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1945. (Ed.D.).

Dvorak, Leo. (Chairman). "Qualifications of a State Supervisor of Music." Springfield, Ill.: Ill. State Dept. of Educ., 1949.

English, William S. "Heritage Songs Required in Elementary School Curriculum Guides." Unpublished Professional Paper, Arizona State University, 1960.

_____. "Curriculum Guide Lines for Junior High School Music." Unpublished Professional Paper, Arizona State University, 1962.

Fink, Robert. "A Survey of Music in the Community Colleges of Michigan." Unpublished Professional Paper, Western Michigan University, 1956.

Fletcher, Grant. "Literacy for Musicians." Music J., 15:5 (May-June, 1957), 19.

Fresno, California Public Schools. "Percentage of Elementary School Teachers Who Teach Their Own Music and Apparent Cause Where Not Doing So." Unpublished Professional Paper, 1931.

Graviet, Donald. "A Survey Study of Selected Trumpet Players with Regard to Embouchure Characteristics." Unpublished Professional Paper, University of Nevada, 1961.

Green, H. Leland. "An Analysis of Successful Programs of Instrumental Music in Selected Elementary Schools of California." Unpublished Doctoral Dissertation, University of Southern California, 1956.

Hare, Robert Y. "A Study of the French Horn in Orchestral Music." Unpublished Professional Paper, San Jose State College, 1950.

"The Harp in Our Public Schools." Harp News, 1:2 (Fall, 1950).

Hartman, Virgil E. "The Use of Contemporary American Music in the Junior High School General Music Class." Unpublished Professional Paper, University of Arizona, 1961. (M.M.E.).

Hermann, Edward J. "Consultant Practices in Elementary Music Education." Baton Rouge: Louisiana State Dept. of Educ., 1960.

Illinois Curriculum Program. Consensus Study in Music Education: Inventories A, B, and C. Springfield, Ill.: Office of the State Superintendent of Public Instruction, 1952.

Jones, George M. "Clarinet and Clarinetist." Unpublished Professional Paper, Douglass College of Rutgers University, 1955.

_____. "The Clarinet Embouchure." Official Bulletin of New Jersey Educ. Ass., 22:2 (1958), 6.

_____. "Playing the Clarinet in Tune." Official Bulletin of New Jersey Educ. Ass., 22:33 (1958), 7.

_____. "Woodwind Clinic: Articulation." Official Bulletin of New Jersey Educ. Ass., 22:6 (1959), 7.

Jones, H. "Experiment in Musical Appreciation." Music Teacher, 34 (May, 1955), 232.

Keene, James. "Physiological Approach to String Playing as Applied to Elementary String Classes." Unpublished Professional Paper, University of Vermont, 1958.

Keston, M. J. "Development of Musical Understanding in Children." Unpublished Professional Paper, University of New Mexico, 1955.

Klaus, Kenneth. "Teaching of Music Theory in Applied Music Lessons." Unpublished Professional Paper, Louisiana State University, 1956.

Kuhn, Wolfgang. "Experimental Internship Program for Training Secondary Teachers." Unpublished Professional Paper, Stanford University, 1962.

Lemons, Jack O. "Evaluative Criteria for Music Education Curricula." Unpublished Doctoral Dissertation, University of Southern California, 1955, (Ed.D.).

Maratta, Jay. "A Survey of the Status of General Music Classes in Selected Junior High Schools of Southern Minnesota." Unpublished Master's Thesis, Mankato State College, 1959.

Metcalf, Roy D. "Expressive Conducting for Instrumental Conductors in High School and College." Unpublished Professional Paper, Kent State University, 1957.

Miller, Ruth E. M. "A Study of the Affects of a General Music Class in the Junior High School on Music Discrimination." Unpublished Master's Thesis, Northwestern University, 1960, (M.M.).

Morrow, Grace. "Study on the Gifted Child (3 years)." Unpublished Professional Paper, Hardin Simmons University.

Nohavec, Hazel B. "A Study in Public Performance: The Operetta." Unpublished Doctoral Dissertation, University of Minnesota, 1938, (Mus. D.).

Perkins, John G. "A Comparative Study of the Interest in Music of White and Negro Delinquent Children." Unpublished Master's Thesis, Richmond Professional Institute, 1950, (M.A.).

Peterson, Priscilla. "An Analysis of the A Cappella Choir in the High School." Unpublished Master's Thesis, University of Denver, 1956, (M.A.).

Petzold, Robert G. "The Perception of Music Symbols in Music Reading by Normal Children." Unpublished Research Report, University of Wisconsin, 1959.

Reeves, William N. "An Exploratory Study of Two Sets of Learning Principles Derived from the Learning Theories of Guthrie and Wheeler as They Relate to the Development of Instrumental Musicianship." Unpublished Doctoral Dissertation, University of Southern California, 1954. (Ph.D.).

Roberson, Ammon. "An Analysis of Twenty-seven Textbooks Used for Conducting Classes." Unpublished Professional Paper, Central Missouri State College, 1954.

_____. "A History of the First Eleven Years of the Civic Symphony of Independence, Missouri." Unpublished Professional Paper, Central Missouri State College, 1956.

_____. "Public Relations and the College-University Music Department." Unpublished Professional Paper, Central Missouri State College, 1955.

_____. "A Survey of the Stated Objectives of One Hundred and Seven Selected Schools of Music in Colleges and Universities." Unpublished Professional Paper, Central Missouri State College, 1955.

_____. "Theological Symbolism to be Found in Gottes Zeit Ist Die Allerbeste Zeit." Unpublished Professional Paper, Central Missouri State College, 1957.

_____. "What is Beauty?" Unpublished Professional Paper, Central Missouri State College, 1953.

Roberts, Alfred L. "Analysis of Elementary Music Text." Unpublished Professional Paper, University of Wyoming, 1957.

Salisbury, Ralph, and Herbert Smith. "Prognosis of Sight Singing Ability." Unpublished Professional Paper, Western Washington College of Education.

Schultz, E. J. "A Survey of Music Education Graduates Estimates as to the Helpfulness, Value, and Adequacy of Courses at the University of Oklahoma." Unpublished Professional Paper, Oklahoma University, 1957.

_____. "An Evaluation of Music Education Curricula at the University of Oklahoma." Unpublished Professional Paper, Oklahoma University, 1952.

_____. "A Study of Practices Governing Graduate Programs Leading to the Masters Degree with a Major in Music Education." Unpublished Professional Paper, Oklahoma University, 1957.

Smith, Robert. "Choral Performance Practice." Unpublished Master's Thesis, Florida State University, 1959. (M.M.Ed.).

Snyder, Hartley D. "A Study of Teaching Music Fundamentals to Prospective Elementary Classroom Teachers." Unpublished Doctoral Dissertation, Colorado State College of Educ., 1950. (Ed.D.).

Stoddard, Eugene M. "Analysis of the Influence of the Bandshow on Academic Achievement in McNary Schools." Unpublished Professional Paper, Arizona State College, 1955.

Tabor, M. Leonard. "A Survey and Evaluation of Selected Student Teaching Programs in Music Education." Unpublished Doctoral Dissertation, University of Southern California, 1955. (Ed.D.).

True, Wesley O. "Goals and Piano Teaching Part I and II." South Carolina Music Teachers Ass. News Notes, 1961-1962.

Van Dyke, Lauren A. "Interscholastic Contest Practice in Public High Schools in Missouri." Unpublished Doctoral Dissertation, University of Missouri, 1941.

Voiles, Dellas G. "A Study of the Comparison of the Six-Period Day Schedule to the Seven or More Period Day Schedule for the Music Education Program in the Small Secondary Schools in the State of Minnesota." Unpublished Professional Paper, University of Denver, 1962.

Wald, Abraham. "A Survey and Analysis of Present Practices in the Seventh and Eighth Grade General Music Classes in the State of Rhode Island." Unpublished Master's Thesis, Boston University, 1960. (M.M.).

Wilson, Suzanne. "A Descriptive Analysis of Out of Tune Singing With Remedial Plan." Unpublished Professional Paper, University of Denver, 1958.

Winter, James H. "Principles of Brass Instrument Pedagogy." Unpublished Professional Paper, State University of Iowa, 1955.

_____. "Teaching the French Horn." Unpublished Professional Paper, Fresno State College, 1949.

B. Title Listing Insufficient or Incorrect

Battle, LeRoy A. "A Functional Guide for Teaching the Beginning Clarinet Player in the Elementary School." Unpublished Paper, University of Maryland, 1960.

Beall, Lee M. "The Adolescent Voice - A Study in Perspective and Methodology." Unpublished Paper, University of Maryland, 1957.

_____. "A Physiological-Methodological Investigation of Music Reading." Unpublished Paper, University of Maryland, 1957.

Blackwell, James. "Audio-Visual Aids in the Development of Reading Readiness." Unpublished Paper, University of Maryland, 1958.

Boutwell, W. D. "Creative Music Awards." Music Educ. J.

Clarke, Dorothy V. "Fostering Music Appreciation Through Listening in the Elementary School." Unpublished Paper, University of Maryland, 1962.

_____. "A Study of the Role of the Music Program in the Total Curriculum Between 1935 and 1960 on the Secondary School Level." Unpublished Paper, University of Maryland, 1962.

Frank, Amalie H. "Developmental Experiences in the Seventh Grade Music Class." Unpublished Paper, University of Maryland, 1962.

_____. "The Use of Rhythm and Melody Instruments in the Teaching of Musical Skills in the Intermediate Grades." Unpublished Paper, University of Maryland, 1961.

Gholson, Elsie F. "A Comparative Survey of Resources Offered by Our Singing World, Together We Sing, and The Music for Living Series: Relating Readiness Program of the Primary Grades in the Elementary Series." Unpublished Paper, University of Maryland, 1957.

Gough, Marion M. "Methods for Improving Accurate Melodic Reading in High School Choral Groups." Unpublished Paper, University of Maryland, 1957.

_____. "Psychological Processes, Methods, and Materials of the Elementary Listening Program." Unpublished Paper, University of Maryland, 1957.

Graves, Louisa Custer Hill. "The First Use of the Term 'General Music' in the United States." Unpublished Paper, University of Maryland, 1960.

Hubel, Hildegard. "An Analysis of the Development of Music Reading in Three Currently Used Music Series." Unpublished Paper, University of Maryland, 1958.

Keene, James. "Music for the Elementary Classroom Teacher." Cadenza Music Magazine.

King, Harry A. "Music and Religious Attitudes." School Music News, 1945.

Long, Raymond V. "Sound-proofing the Band Room." The Nation's Schools, 30:9 (November, 1942).

Noble, Robert F. "The Future in Music Education." Washington Music Educ., 1961.

Phillips, C. P. "Sneers and Statistics; Comments on Findings of A National Music Survey." Musician, 53 (September, 1948), 82.

Revelli, William D. "Community Service Through Instrumental Music." M.E.N.C., Book of Proceedings, 1937.

Rich, Alma Holton. "Elements of the Elementary School Music Education Program which Foster Mental Health." Unpublished Paper, University of Maryland, 1957.

_____. "Music in the Core Program in the Junior High School." Unpublished Paper, University of Maryland, 1959.

Richardson, T. F., and C. F. Lehman. "High School Band Twirlers." Texas Christian University: School of Fine Arts.

Rusinko, Emil Edward. "A Study of the Methods Used in Evaluating and Grading the Musical Learning of the Instrumental Music Student." Unpublished Paper, University of Maryland, 1962.

Simonel, Charlotte. "A Study of the Use of Exploratory Instruments in Grades One to Six." Unpublished Paper, University of Maryland, 1959.

Swan, Janice J. "A Study of Existing Relationships between the Guidance Program and the Music Program in the Secondary School." Unpublished Paper, University of Maryland, 1956.

Webb, Karl E. "Making the Study of Harmony Function in Violin Playing." Etude, 1937.

Weigl, Vally. "Give Them Music." Crippled Child, (April, 1957), 13-15.

Wise, M. E. "Planning a Scientific Program of Music for a Junior High School." MENC, 1934, 233-37.

Yeager, William. "Vibration of the Walls of a Cornet." Ohio State University, 1941.

C. Research Not Completed

Cleino, Edward H. A Study of the Fees Charged Music and Music Education Majors in Selected NASM-Accredited State Universities. University, Ala." University of Alabama, 1954.

Glowacki, Stanley. "Elementary School Music as Related to Esthetic Theory." Unpublished Doctoral Dissertation, Yale University.

Hilton, Lewis. "Secondary Instrument Class Method for the Music Education Major." Unpublished Professional Paper, Washington University.

Hilton, Winston. "An Evaluative Study of Public School Music in Louisiana." Unpublished Doctoral Dissertation, Louisiana State University.

Hinton, Wilbur F. "The High School Band Movement in Alabama." Unpublished Doctoral Dissertation, University of Alabama.

Imig, Warner. "The Music Activity Program in the Elementary School and Its Relationship to the Elementary Teacher Training Program." Unpublished Doctoral Dissertation, Stanford University, 1953.

Lambert, Milton I. "The Knowledge of Music Notation and Theory that Exists Among Board Members in Pennsylvania Secondary Schools." Unpublished Doctoral Dissertation, Pennsylvania State, 1953.

Magee, H. J. "Demand for Special Teachers of Physical Education, Music and Drawing." Albany, New York: N. Y. State Education Dept.

Moon, Alfred C. "An Investigation of the Scope of Mood Responses to Instrumental Music of Intermediate Grade Pupils." Unpublished Doctoral Dissertation, University of Missouri, 1953.

Morrow, Grade Kline. "Developing Course of Study in Jr. High Sch. General Music." Unpublished Professional Paper, Hardin Simmons University.

Prescott, Gerald R. "Programs for the Preparation of Music Teachers in Four-Year Colleges in Minnesota." Unpublished Doctoral Dissertation, Univ. of Colorado, 1953.

Wareham, Elmer C. "A Survey of Music Appreciation Classes and the Curricular Materials Used in 150 Senior High Schools of Pennsylvania." Unpublished Doctoral Dissertation, Pennsylvania State University, 1953.

Watkins, Robert Harry. "Evaluation of Graduate Programs in Music Education." Unpublished Doctoral Dissertation, University of Illinois.

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APPENDIX E

Bibliographic Sources

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APPENDIX E

BIBLIOGRAPHIC SOURCES

Three sources of information were used for identifying possible research studies in terms of the project's initial definition of music education: (1) the relevant and competent studies reviewed and abstracted in the project, (2) the research report forms submitted by the various scholars and institutions, and (3) published bibliographic listings and other related published documents. The studies reviewed in the first type of bibliographic source, namely 273 documents, are not included in the following list becuause these are listed in the Bibliography of this report. The institutions reporting research, the second source for titles, are listed in the Appendix of Cooperating Institutions.

The list which follows, therefore, is drawn mainly from the third source of information -- publication. The list does contain, however, titles of particular studies (e.g. bibliographic listings or syntheses) obtained from the other two types of sources. It will be noted that an unorthodox form is used for volumes of works such as journals, abstracts, yearbooks, etc. This style was adopted to avoid a lengthy and repetitious list.

Acta Psychologica, Vols. 1-20 (1935-1962). Amsterdam: Holland Pub. Co.

Adams, Sterling C. "An Exploratory Study of the Application of Two Learning Theories to the Teaching of Piano." Unpublished Doctoral Dissertation, University of Indiana, 1962, (Ph.D.). (Univ. Micro. No. 62-5003; D.A. Vol. 23, p. 2162).

Albert, Ethel M., Clyde Kluckholn, et al. A Selected Bibliography on Values, Ethics and Esthetics in the Behavioral Sciences and Philosophy, 1920-1958. Glencoe, Ill.: Free Press, 1959.

Albert, Vernon F. "Theoretical and Experimental Analysis of Networks of Resonators and Their Application to the Production of Sound by the Vocal Tract." Unpublished Doctoral Dissertation, Temple University, 1951, (Ph.D.). (Univ. Micro. No. 60-4429; D.A. Vol. 22, p. 287).

Allen, Clifford. Modern Discoveries in Medical Psychology. (2nd ed.) London: MacMillan and Co., Ltd., 1949.

Allen, Lillian M. The Present Status of Accredited Music Instruction in American University. Washington: Catholic Univ. of Amer. Press, 1954.

Allen, Mary E. "A Comparative Study of Negro and White Children on Melodic and Harmonic Sensitivity." J. of Negro Educ. 11 (April, 1942), 158-164.

Alschuler, R. H. Two to Six. New York: Morrow, 1933.

American Association for Gifted Children. The Gifted Child. Boston: Health, 1951.

American Council of Learned Societies, Committee on Musicology. A Bibliography of Periodical Literature in Musicology and Allied Fields, No. 1, Oct. 1, 1938 - Sept. 30, 1939, compiled by D. H. Daugherty. Washington: The Council, 1940.

American Music Teacher. Vols. 1-12 (1951-1963). Cincinnati: Music Teachers Nat. Ass., Inc.

American String Teacher, Vols. 1-12 (1951-1962). Urbana, Ill.: Amer. String Teachers Ass.

Anderson, Robert. "A Study of the Pertinence and Relationship of Selected Factors of the Special and Professional Phases of Undergraduate Music Teacher Education to Public School Music Teaching in Ohio." Unpublished Doctoral Dissertation, The Ohio State Univ., 1960, (Ph.D.).

Andrews, Frances M. "The Development of a Rehearsal Technique for a Secondary School Choral Group Based on the Use of the Magnetic Tape Recording Machine as a Tool for the Choral Director." Unpublished Doctoral Dissertation, Pennsylvania State College, 1948, (D.Ed.).

Andrews, Frances M. (Ed.) "Music - A Vital Force in Today's Secondary Schools." Bull. Nat. Ass. Secondary-School Principals, 43: 245 (March 1959, (Part I). 1-115.

Andrews, Frances M., and Clara E. Cockerille, Your School Music Program. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1958.

Andrews, Frances M., and Joseph A. Leeder, Guiding Junior High School Pupils in Music Experiences. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1953.

Andrews, Gladys. Creative Rhythmic Movement for Children. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1954.

Antrim, Doron K. Having Fun with Music. New York: Thomas Y. Crowell, 1958.

Appleman, Dudley R. "A Study by Means of Planigraph, Radiograph and Spectrograph of the Physical Changes Which Occur During the Transition from the Middle to the Upper Register in Vocal Tones." Unpublished Doctoral Dissertation, Indiana University, 1953, (Ph.D.). (Univ. Micro. No. 6429; D.A. Vol. 14, p. 147).

Armour, Eugene. "The Melodic and Rhythmic Characteristics of the Music of the Traditional Ballad Variants Found in the Southern Appalachians." Unpublished Doctoral Dissertation, New York University, 1961, (Ph.D.). (Univ. Micro. No. 62-1409; D.A. Vol. 22, p. 4368).

Auburn, Corisande. "Teacher-Training Institutions in Relation to the Apparent Widespread Lack of Teacher Understanding Concerning Junior High Vocal Phenomena and Its Choral Potential." Unpublished Master's Thesis, Florida State University, 1953, (M.M.E.).

Baird, Forrest J. "A Follow-up Inquiry of Secondary School Music Teachers Prepared at San Jose State College." Unpublished Doctoral Dissertation, Stanford University, 1955, (Ed.D.). (Univ. Micro. No. 56-454; D.A. Vol. 16, p. 288).

Baker, Alice E. "A Preliminary Study of the Literature in Music and Related Fields Concerning Stage Fright." Unpublished Master's Thesis, The Ohio State University, 1954, (M.A.).

Barnes, James W. An Experimental Study of Interval Drill as it Affects Sight-Singing Skill. Ann Arbor: Univ. Microfilms, 1961.

Barnett, David. Living with Music. New York: George E. Stewart, Inc., 1944.

Barnett, David. They Shall Have Music. New York: George E. Stewart, Inc., 1944.

Barrett, James H. "The Education of the Music Teacher." Doctoral Field Study, No. 1, Colorado State College of Education, 1950, (Ed.D.).

Barrett, Roger L. "A Study of the General Nature of Ideational Perception: Music." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-5543; D.A. Vol. 22, p. 2814).

Bartholomew, W. T. "A Survey of Recent Voice Research." In Karl Gehrkins (Ed.) Proceedings of the Music Teachers National Association, Thirty-Second Series. Oberlin, O.: The Association, 1937, 115-38.

Bartholomew, Wilmer T. Acoustics of Music. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1942.

Beall, Lee M. "Elementary and Junior High School Voice Training, Visual Analysis, and Aesthetics of Listening: An Analysis of the Literature and an Application in a Specific Area." Unpublished Doctoral Dissertation, The American University, 1958. (Ed.D.). (Univ. Micro. No. 58-2804; D.A. Vol. 19, p. 469).

Beattie, J. W. Music in the Junior High School. New York: Silver Burdett Co., 1938.

Beckman, Gertrude W. Tools for Speaking and Singing. New York: G. Schimer, Inc., 1955.

Bell System Technical Journal. Vols. 9-41 (1930-1962). New York: Amer. Telephone and Telegraph Co.

Bennett, Fred. "The Relationship Between Participation in Student Activities in Certain New York State High Schools and Later Civic and Social Participation." Unpublished Doctoral Dissertation, Cornell University, 1956. (Ph.D.). (Univ. Micro. No. 56-2150; D.A. Vol. 16, p. 1369).

Berger, K. "The Band in the United States: A Preliminary Review of Band Research and Research Needs." Evansville, Ind.: Band Associates, 1961.

Berger, Kenneth W. "An Electromyographic Investigation of Respiratory Muscle Activity During Varied Vocal Attack." Unpublished Doctoral Dissertation, Southern Illinois University, 1962, (Ph.D.). (Univ. Micro. No. 62-490; D.A. Vol. 23, p. 2619).

Bergethon, Bjonas and Eunia Boardman. Musical Growth in the Elementary School. New York: Holt, Rinehart, and Winston, Inc., 1963.

Berkowitz, Sol.,Gabriel Fontrier, and Leo Kraft. A New Approach to Sight Singing. New York: W. W. Norton, 1960.

Berner, Jeanette C. "Music." In Helen Louise Cohen and Nancy G. Coryell (Eds.) Educating Superior Students. New York: The American Book Company, 1935. pp. 244-266.

Bernstein, Benjamin B. "An Analysis of Full Time Summer Music Programs Sponsored for Secondary School Students by Publicly Supported American Colleges and Universities." Unpublished Doctoral Dissertation. Univ. of Nebraska Teacher's College, 1960, (Ed.D.). (Univ. Micro. No. 60-5561; D.A. Vol. 21, p. 2316).

Bienstock, Sylvia F. "Report of National Survey of Experimental Projects in Music Education." Yearbook of the Music Educators National Conference, 1936. Chicago: Music Educ. Nat. Conf., 1937, 277-283.

Bienstock, Sylvia F. "A Review of Recent Studies on Musical Aptitude.: J. of Educ. Psychol., 33 (1942), 427-42.

Bienstock, Sylvia F. and N. McDavid. "Bibliography of Studies in the Field of Music Education." Yearbook of the Music Educators National Conference, 1936. Chicago: Music Educ. Nat. Conf., 1937, 284-288.

Biggs, Millard R. "An Evaluation of a Technique Employing the Use of the Magnetic Tape Recorder in Teaching of Students of Brass Instruments." Unpublished Doctoral Dissertation, State University of Iowa, 1960, (Ph.D.). (Univ. Micro. No. 60-5641; D.A. Vol. 21, p. 1961).

Bilger, Robert C. "A Comparison of Monaural and Binaural Listening in Three Levels of Ambient Voice." Unpublished Doctoral Dissertation, Purdue University, 1954, (Ph.D.). (Univ. Micro. No. A54-3183; D.A. Vol. 14, p. 2131).

Bing, Mariana, (Ed.) Music Therapy 1953. Lawrence, Kansas: The Nat. Ass. for Music Therapy, 1954.

Biondo, Charles A. Starting the Instrumental Program. Toledo, Ohio: Gregorian Inst. of Amer., 1957.

Bird, M. H. A Study in Aesthetics. Cambridge: Harvard Univ. Press, 1932.

Birge, Edward B. History of Public School Music in the United States. Philadelphia: Oliver Ditson Pub. Co., 1939.

Blackwell, Annie M. Lists of Researches in Education and Educational Psychology. (Suppl. 2) London: Newnes Educ. Pub. Co., Ltd., 1956.

Blades, James. Orchestral Percussion Technique. London: Oxford Univ. Press, 1961.

Boekelheide, Viola E. "Some Techniques of Assessing Certain Basic Music Listening Skills of Eight and Nine-Year-Olds." Unpublished Doctoral Dissertation, Stanford University, 1960, (Ed.D.). (Univ. Micro. No. 60-6699; D.A. Vol. 21, p. 3111).

Bohn, Russel K. "An Evaluation of Music Theory and Harmony Classes in Selected Public High Schools of Pennsylvania." Unpublished Doctoral Dissertation, Pennsylvania State University, 1957, (Ed.D.). (Univ. Micro. No. 23-995; D.A. Vol. 17, p. 2870).

Boring, Edwin G. Sensation and Perception in the History of Experimental Psychology. New York: Appleton-Century, Inc., 1942.

Bowen, George O. and Kenneth C. Mook. Song and Speech. Boston: Ginn and Co., 1952.

Boyd, Maurice O. "An Investigation and Evaluation of Music Education in the State of Wisconsin." Unpublished Doctoral Dissertation, University of Wisconsin, 1942, (Ph.D.).

Boyd, Silas L. "The Music Preparation of General Elementary Teachers in State Supported Colleges and Universities." Unpublished Doctoral Dissertation, Indiana University, 1961, (Ed.D.). (Univ. Micro. No. 61-4896; D.A. Vol. 22, p. 4036).

Boyer, George F. "An Evaluation of the Course Content of Basic Music Theory in the Music Education Cirriculum as Determined by a Job-Analysis of Secondary School Music Teachers in the State of Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1958, (Ed.D.). (Univ. Micro. No. 58-2340; D.A. Vol. 19, p. 147).

Bradford, Henry, Jr. "Teaching Fundamentals of Music to Freshman Education Students Through the Use of Music Literature at Alabama Agricultural and Mechanical College, Normal, Alabama. Vols. I & II." Unpublished Project Report, Teachers College, Columbia University, 1961, (Ed.D.).

Brass Quarterly. Vols. 1-5 (1957-1962). Durham, New Hampshire: Brass Quar.

Bray, Marianne. "A Comparative Review of the Educational, Vocational and Avocational Experiences of the Graduates of the School of Music, Northwestern University, 1954, (Ph.D.). (Univ. Micro. No. 54-2581; D.A. Vol. 14, p. 1756).

Brehaut, Willard. A Quarter Century of Educational Research in Canada: An Analysis of Dissertations (English) in Education Accepted by Canadian Universities, 1930-55. Toronto, Canada: Ontario Coll. of Educ., 1958.

Breitenfeldt, Dorvan H. "An Electromyographic Investigation of Respiratory Muscle Activity During Normal and Simulated Nasalized Vocalization." Unpublished Doctoral Dissertation, Southern Illinois University, 1962, (Ph.D.). (Univ. Micro. No. 63-1475; D.A. Vol. 23, p. 3020).

Britton, Allen P. "Research in Music Education." Education, 74 (September, 1953), 40-44.

Broman, Keith L. "The Effects of Subjective Rhythmic Grouping Observed under the Influence of Variable Rates, Frequencies, Numbers, and Tonal Stimuli." Unpublished Doctoral Dissertation, Indiana University, 1956, (Ph.D.). (Univ. Micro. No. 17-941; D.A. Vol. 16, p. 2535).

Brooks, Marion B., and Harry A. Brown. Music Education in the Elementary School. New York: Amer. Book Co., 1946.

Burkholder, Kenneth. "A Follow-up Study of 331 Academically Talented Students Who Graduated from Omaha North High School During 1953 to 1958." Unpublished Doctoral Dissertation, University of Nebraska, Teachers College, 1959, (Ed.D.). (Univ. Micro. No. 59-4365; D.A. Vol. 20, p. 3141).

Bush, Irving R. Artistic Trumpet Technique and Study. Hollywood, Calif.: Highland Music Co., 1962.

Byrens, F. C. "Recent Experiments in Music Appreciation." Yearbook of the Music Educators National Conference, 1935. Chicago: Music Educ. Nat. Conf., 1936, 198-204.

Cain, Noble. Choral Music and Its Practice. New York: M. Whitmark and Sons, 1932.

California Department of Education, Committee on Music Education in the Elementary School. Music Education in the Elementary School. Helen Hefferman and Mary E. Ireland (Chairmen). Sacramento, Calif.: Calif. State Dept. of Educ., 1939.

Carabo-Cone, Madeleine, and Beatrice Royt. How to Help Children Learn Music. New York: Harper & Bros., 1955.

Carey, Margaretta A. "Music for the Educable Mentally Retarded." Unpublished Doctoral Dissertation, The Pennsylvania State University, 1958, (Ed.D.). (Univ. Micro. No. 59-751; D.A. Vol. 19, 2967).

Carrico, John L. "A Study of Applied Music in Four-Year State-Supported Colleges of Texas." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1955, (Ed.D.).

Castro, Orfalinda G. "A Study of the Effects of Integrated Theory in a Junior High School Boy's Chorus." Unpublished Master's Thesis, University of Texas, 1956, (M.M.).

Cather, George D. "The Trend of Research Studies in Music Education at the University of Southern California, 1924-1949." Unpublished Master's Thesis, Univ. of Southern California, 1950, (M.M.). (U.S.C. Micro. No. 39-420).

Champlin, Doris (Ed.) Music and the Child. New York: Child Study Ass. of Amer., 1930.

Chandler, Albert R. and E. N. Barnhart, A Bibliography of Psychological and Experimental Aesthetics, 1864-1937. Berkeley: University of Calif. Press, 1938.

Chapman, F. B. Flute Technique. London: Oxford Univ. Press, 1951.

Charles, Norman. "Social Values in American Popular Songs (1890-1950)." Unpublished Doctoral Dissertation, University of Pennsylvania, 1958. (Ph.D.). (Univ. Micro. No. 58-3313; D.A. Vol. 19, p. 783).

Cheslock, Louis. Research Studies in Music: Violin Vibrato. Baltimore, Maryland: Peabody Conser. of Music, 1931.

Child Development Abstracts and Bibliography. Vols. 4-37 (1930-1963). Lafayette, Ind.: Soc. for Res. in Child Development.

Choral Journal. Vols. 1-4 (1959-1964). Tampa Florida: Amer. Choral Dir. Ass.

Chrisman, Miller L. "Preparation and Experience of the Music Teacher in High Education." Unpublished Doctoral Dissertation, University of Southern California, 1962, (Ed.D.). (Univ. Micro. No. 63-2143; D.A. Vol. 23, p. 3681).

Christianson, Helen. Bodily Rhythmic Movements of Young Children in Relation to Rhythm in Music. New York: Bureau of Pub., Teachers Coll., Columbia Univ., 1938.

Christianson, Helen (Compiler). Music and the Young Child. Washington, D.C.: Ass. for Childhood Educ., 1936.

Church, Norval L., and Peter Dykema. The Church and Dykema Modern Band Training Series. Boston: C. C. Birchard and Co., 1939.

The Clarinet: A Symphony Quarterly. No. 1-15 (1951-1954). New York: Symphony.

Cleino, Edward H. "An Ensemble Method for Teaching Percussion Instruments." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958, (Ed.D.). (Univ. Micro. No. 59-1089; D.A. Vol. 19, p. 2967).

Clevenger, T., Jr. "A Synthesis of Experimental Research in Stage Fright." Quart. J. of Speech, 45 (1959), 134-145.

Clinton, Robert L., Jr. "An Evaluative Study of the Effectiveness of the Music Education Programs in Texas Colleges and Universities." Unpublished Doctoral Dissertation, Texas Technological College, 1962, (Ed.D.). (Univ. Micro. No. 62-4191; D.A. Vol. 23, p. 936).

Clippinger, David A. The Clippinger Class-Method of Voice Culture. Boston: Oliver Ditson Co., Inc., 1932.

Coleman, Satis N. First Steps in Playing and Composing. (rev. ed.) New York: John Day Co., 1930.

Coleman, Satis N. "First Steps in Playing and Composing." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1930.

Colin, Charles. Trumpet: Vital Brass Notes. New York: Charles Colin, 1948.

Collins, Gertrude. Violin Teaching in Class. London: Oxford Univ. Press, 1962.

Collins, Myron D., and John E. Green. Playing and Teaching Percussion Instruments. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962.

Condon, Mary M. How Good Is Your Elementary Music Program? Helena, Montana: Montana Dept. of Public Instr., 1953.

Connette, Earle, and James L. Mursell. "Special Methods and Psychology of the Elementary School Subjects: Music." Rev. of Educ. Res., 7 (1937), 491-92, 561-62.

Cook, Clifford A. String Teaching and Some Related Topics. Urbana, Ill.: Amer. String Teachers Ass., 1957.

Cooley, John C. "A Study of the Relationship Between Certain Mental and Personality Traits and Ratings of Musical Abilities." Unpublished Doctoral Dissertation, Michigan State University, 1952, (Ed.D.). (Univ. Micro. No. A53-445; D.A. Vol. 13, p. 240.

Cort, Henry R., Jr. "Tempo and Expressive Properties of Auditory Figures: A Psychophysical Study." Unpublished Doctoral Dissertation, Cornell University, 1960 (Ph.D.). (Univ. Micro. No. 60-6499; D.A. Vol. 21, p. 2011; P.A. Vol. 36, p. 498, No. 36J 23B).

Council of Research in Music Education. Bulletin No. 1-3 (1963-1964). Urbana, Illinois: Office of Supt. of Public Instr. and Coll. of Educ.

Crabb, Eugene N. "The High School Orchestra as an Integral Part the Music Curriculum in Florida, 1920-1957." Unpublished Doctoral Dissertation, Univ. of Southern California, 1959, (D.M.Ed.). (Univ. Micro. No. 59-1841; D.A. Vol. 20, p. 320).

Craig, Walter O., Jr. "Bibliography of Research Studies in Music at Boston University to 1955." Unpublished Master's Thesis, Boston University, 1956, (M.M.).

Cranmer, Arthur. The Art of Singing. London: Dennis Dobson Books, Ltd., 1957.

Cummins, D. B. Making an Orchestra. New York: The Macmillan Co., 1947.

Cundiff, Hannah M., and Peter W. Dykema. New School Music Handbook. Boston: C. C. Birchard and Co., 1955.

Dalby, Max F. "Psychology and Method in Teaching Woodwind Instruments." Unpublished Doctoral Dissertation, Utah State University, 1961, (Ed.D.). (Univ. Micro. No. 61-4925; D.A. Vol. 22, p. 1918).

Darnes, George R. "The Development of a Pre-Doctoral Master of Music Education Degree Program." Unpublished Doctoral Dissertation, University of Oklahoma, 1958, (Ed.D.). (Univ. Micro. No. 58-3864; D.A. Vol. 19, p. 1243).

Daugherty, D. H., L. Ellinwood, and Richard S. Hill. (Eds.) A Bibliography of Periodical Literature in Musicology and Allied Fields. No. 2: October 1, 1939 - September 30, 1940. Washington, D.C.: Amer. Council of Learned Soc., 1943.

Daugherty, D. H. A Bibliography of Periodical Literature in Musicology and Allied Fields and a Record of Graduate Theses Accepted. No. 1, October 1, 1938 - September 30, 1939. Washington, D.C.: Amer. Council of Learned Soc., 1940.

Davidson, James W. "Construction and Appraisal of Procedures and Materials for Developing Consensus Regarding Music Education Programs." Unpublished Doctoral Dissertation, University of Illinois, 1954, (Ed.D.). (Univ. Micro. No. A54-1385; D.A. Vol. 14, p. 942).

Davis, Ennis. More Than A Pitch-Pipe. Evanston, Ill.: C. C. Birchard and Co., 1941.

Deafness, Speech and Hearing Abstracts, J. D. Schein, (ed). Vols. 2-3 (1961-1963). Washington, D.C.: Deafness, Speech and Hearing Pub., Inc.

Deaver, Sarah D. "A Survey of the Musical Tastes of Children in the Fifth and Sixth Grades Outside of the School Music Program." Unpublished Master's Thesis, Northwestern University, 1956, (M.M.).

Decherd, Emma V. "Radio Preferences of 200 High School Choral Music Students." Unpublished Master's Thesis, University of Texas, 1952, (M.M.).

Denney, Reul and Mary Lea Meyersohn. "A Preliminary Bibliography on Leisure." Amer. J. Sociol., 62 (May, 1957), 602-15.

DeYoung, Richard. The Singers Art: An Analysis of Vocal Principles. Chicago: DePaul Univ., 1958.

Diserens, C. M., and Harry Fine. A Psychology of Music. Cincinnati: Coll. of Music, 1939.

Dissertation Abstracts; Abstracts of Dissertations and Monographs in Microfilm, Vols. 12-25 (1952-1964). Ann Arbor, Mich.: Univ. microfilms.

Doctoral Dissertations Accepted by American Universities. Vols. 1-22 (1933-1955). New York: H. W. Wilson Co.

Dolejsi, Robert. Modern Viola Technique. Chicago: Univ. of Chicago Press, 1939.

Dominy, Elizabeth E. "Music Textbooks in Elementary Education: The Appropriateness of Current Textbook Material in Elementary School Music in Relation to the Aims and Purposes of Modern Elementary Education." Unpublished Doctoral Dissertation, New York University, 1958, (Ed.D.). (Univ. Micro. No. 58-5651; D.A. Vol. 19, p. 1779).

Dorn, Gerhardt G. "Harmonic Mutation as a Function of Stimulus Intensity." Unpublished Doctoral Dissertation, North Texas State College, 1955 (Ph.D.). (Univ. Micro. No. 55-1690; D.A. Vol. 15, p. 2540).

Dressel, Paul., Lewis B. Mayhew, and Earl J. McGrath. The Liberal Arts as Viewed by Faculty Members in Professional Schools. New York: Bureau of Pub. Teachers Coll., Columbia Univ., 1959.

Driver, Ann. Music and Movement. London: Oxford Univ. Press, 1936.

Dunbar, Rudolph. Treatise on the Clarinet. Glasgow: John E. Dallas and Sons Ltd., 1941.

Duvall, W. C. The High School Band Director's Handbook. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963.

Dykema, Peter W. Music for Public School Administrators. New York: Teachers Coll., Columbia Univ., 1931.

Dykema, Peter and Karl W. Gehrkens. The Teaching and Administration of High School Music. Boston: C. C. Birchard & Co., 1941.

Dyrud, Justin D. "A Study of the Qualifications and Experiences in Music of Elementary Classroom Teachers in the Public Schools of Oregon." Unpublished Doctoral Dissertation, University of Oregon, 1959, (Ed.D.). (Univ. Micro. No. 59-4308; D.A. Vol. 20, p. 1818).

Earhart, Will. Choral Technics. New York: M. Witmark & Sons, 1937.

Earhart, Will. The Meaning and Teaching of Music. New York: Witmark Educ. Pub., 1935.

The Education Index (1929-1963). New York: The H. W. Wilson Co.

Educational Music Magazine. Vols. 14-36 (1934-1957). Chicago: Educ. Music Bureau, Inc.

Edwards, Arthur C. String Ensemble Method for Teacher Education. Dubuque, Iowa: W. C. Brown Co., 1959.

Egbert, Marion S. Seeing What We Sing. Boston: C. C. Birchard & Co., 1954.

Ehrlich, Stephane. "Rhythm: Recent French Contributions." Acta Psychol., Amsterdam., 17 (1960), 155-176.

Eisenberg, Maurice and M. B. Stanfield. Cello Playing of Today. London: The Strad, 1957.

Eisenberg, Helen and Larry Eisenberg. How To Lead Group Singing. New York: Ass. Press, 1955.

Ekstrom, Ellwood R. "Singing Intensity as Related to Singer Experience." Unpublished Doctoral Dissertation, Indiana University, 1959, (Mus. D.). (Univ. Micro. No. 59-6120; D.A. Vol. 20, p. 3769).

Ekstrom, Robert C. "Comparison of the Male Voice Before, During, and After Mutation." Unpublished Doctoral Dissertation, University of Southern California, 1959, (Ed.D.). (Univ. Micro. No. 60-390; D. A. Vol. 20, p. 3569).

Elliot, Raymond. Learning Music: Basic Concepts for Elementary Teachers. Columbus, Ohio: Merrill Books, 1960.

Ellison, Alfred. Music with Children. New York: McGraw-Hill Book Co., 1959.

Engelberg, Marvin W. "Auditory Matching as a Procedure in the Classification of Voices." Unpublished Doctoral Dissertation, University of Michigan, 1959, (Ph.D.). (Univ. Micro. No. 59-2111; D.A. Vol. 19, p. 3412).

Engelsmann, Walter. "Beethoven And the Creative Law in Symphonic Art." Musical Quart., 23 (1937), 56-63.

Engineering News-Record. Vols. 105-169 (1930-1962). Albany, N.Y.: McGraw Hill Pub. Co.

English, William S. "Learning Experiences That Prepare School Music Teachers for Selected Activities." Unpublished Doctoral Dissertation, George Peabody College, 1958, (Ph.D.). (Univ. Micro. No. 59-1096; D.A. Vol. 19, p. 2862).

Ernest, David J. "An Analysis of the French Style of Oboe Performance." Unpublished Doctoral Dissertation, University of Colorado, 1961, (Ed.D.). (D.A. Vol. 22, p. 3218).

Ethnomusicology Newsletter. Nos. 1-6 (1953-1957). Middletown, Conn.: Wesleyan Univ. Press.

Ethnomusicology. Vols. 1-7 (1957-1963). Middletown, Conn.: Wesleyan Univ. Press.

Evans, Kathleen M. "An Annotated Bibliography of British Research on Teaching and Teaching Ability." Educ. Res., 4 (November 1961), 67.

Ewers, Dorthea W.F. "Relations between Auditory Abilities and Reading Abilities." J. Exp. Educ., 18 (March, 1950), 239-262.

Farkas, Philip. The Art of French Horn Playing. Chicago: Clayton F. Summy Co., 1956.

Farnsworth, Paul. "The Kwalwasser-Dykema Tests as Psychological Tools." Genet. Psychol. Monogr., 15 (January, 1934), 50-84.

Farnsworth, Paul R. "School Instruction in Music." Rev. of Educ. Res., 16 (1946), 182-90.

Farnsworth, Paul R. The Social Psychology of Music. New York: Dryden, 1958.

Farnum, Stephen E. "Prediction of Success in Instrumental Music." Unpublished Doctoral Dissertation, Harvard University, 1950, (Ed.D.).

Faulkner, Maurice E. "The Roots of Music Education in American Colleges and Universities." Unpublished Doctoral Dissertation, Stanford University, 1955, (Ph.D.). (Univ. Micro. No. 16-022; D.A. Vol. 16, p. 704).

Fergus, Patricia M. "Factors Affecting the Development of the Orchestra and String Program in Minnesota Secondary Schools 1940-1960." Unpublished Doctoral Dissertation, University of Minnesota, 1960, (Ph.D.). (Univ. Micro. No. 61-561; D.A. Vol. 21, p. 2943).

Ferguson, Donald N. On the Elements of Expression in Music. Minneapolis, Minn.: Univ. of Minn., 1950.

Ferrell, John W. "A Validity Investigation of the Drake Musical Aptitude Tests." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-5563; D.A. Vol. 22, p. 28).

Field-Hyde, F. C. The Art and Science of Voice Training. London: Oxford Univ. Press, 1950.

Fields, Victor A. Training the Singing Voice. Morning Heights, N.Y.: King's Crown Press, 1947.

Fitch, William D. The Study of the Oboe. Ann Arbor: George Wahr Pub. Co., 1949.

Fitzgerald, Bernard. "Research Studies in Brass Instruments." Instrumentalist, 3 (November-December, 1948), 15.

Fjeld, Marvin W. "A Survey and Evaluation of Music Performed in Public Concert by Indiana High School Bands." Unpublished Doctoral Dissertation, Indiana University, 1959, (Ed.D.). (Univ. Micro. No. 59-6578; D.A. Vol. 20, p. 3570).

Flagg, M. "Experimental Projects in Music Education." Yearbook of the Music Educators National Conference, 1936. Chicago: Music Educ. Nat. Conf., 1937, 276.

Flagg, M. "Report of the Committee on Experimental Projects." Yearbook of the Music Educators National Conference, 1938. Chicago: Music Educ. Nat. Conf., 1939, 399-400.

Flagg, Marion K. Musical Learning. Boston: C. C. Birchard and Co., 1949.

Flemming, Cecile White et al. A Descriptive Bibliography of Prognostic and Achievement Tests in Music. New York: Teachers Coll., Columbia Univ., 1936.

Flesch, Carl. The Art of Violin Playing: Books I and II. New York: Carl Fischer, Inc., 1930.

Flesher, William R., and Marie A. Flesher. Ohio State University Doctoral Theses Listing, 1953-1959. Columbus, Ohio: The Ohio State Univ., 1954.

The Flute Book. Kenosha, Wis.: G. Leblanc Co., 1953.

Fox, Lillian Mohr and L. Thomas Hopkins. Creative School Music. New York: Silver Burdett Co., 1936.

Franca, Ida. Manual of Bel Canto. New York: Coward-McCann, Inc., 1959.

Frances, R. "Problems and Methods in the Psychology of Musical Expression." (Problems et Methodes de la Psychologie de 1' Expression Musicale). J. de Psychol. Norm. Pathol., 52 (1955), 504-519. (P.A. Vol. 31, p. 48, No. 635).

Friedman, Bernard. "An Evaluation of the Achievement in Reading and Aritmetic of Pupils in Elementary School Instrumental Music Classes." Unpublished Doctoral Dissertation, New York University, 1959, (Ed.D.) (Univ. Micro. No. 59-6219; D.A. Vol. 20, p. 3662).

Funchess, Lloyd V. "Research is Needed in Music Education." Phi Delta Kappan, 30 (November, 1948), 349-350.

Galamian, Ivan. Principles of Violin: Playing and Teaching. Englewood Cliffs, N.J.: Prentice-Hall Inc., 1962.

Garrett, Allen M. An Introduction to Research in Music. Washington, D.C.: Catholic Univ. of Amer. Press, 1958.

Gaston, E. Thayer. "Factors Which Underlie the Development of a Research Program." J. of Res. in Music Educ. 3 (Spring, 1955), 21-22.

Gaston, E. Thayer. Test of Musicality. Lawrence, Kansas: Odell's Instrumental, c. 1957.

Gatwood, Robin F. "The Application of Certain Types of Electronic Equipment to the Teaching of Music. Part I. (Part II: A Handbook for the Help and Guidance of Teachers of Applied Music)." Unpublished Doctoral Dissertation, New York University, 1960, (Ed.D.). (Univ. Micro. No. 61-364; D.A. Vol. 21, p. 3478).

Gehrkens, Karl W. Music in the Grade Schools. Boston: C. C. Birchard and Co., 1936.

Gehrkens, Karl W. Music in the Junior High School. Boston: C. C. Birchard and Co., 1936.

Gelineau, Ruth Phyllis Boak. "Factors Influencing Attitudinal Variation Among Classroom Teachers in the Teaching of Music." Unpublished Doctoral Dissertation, University of Connecticut, 1960, (Ph.D.). (Univ. Micro. No. 60-5230; D.A. Vol. 21, p. 2610).

Gell, Heather. Music, Movement and the Young Child. Sydney, Australia: Australasian Pub. Co., 1959.

Gescheidt, Adelaide. Make Singing A Joy. Cincinnati: Willis Music Co., 1930.

Gesell, Arnold, and Catherine S. Amatruda. Developmental Diagnosis. New York: Paul G. Hoeber, Inc., 1941.

Gesell, Arnold et al. The Child from Five to Ten. New York: Harper and Bros., 1946.

Gesler, Harriet L. "An Analysis of the Relation Between Pitch Discrimination and Phonic Sensitivity in First Grade Children." Unpublished Doctoral Dissertation, University of Connecticut, 1958, (Ph.D.). (Univ. Micro. No. 58-3916; D.A. Vol. 19, p. 988).

Ginn, Mary L. "A Review of Research Concerning the Relation of Emotions to Music." Unpublished Master's Thesis, Ball State Teachers College, 1958, (M.A.).

Glasgow, Robert B. "A Study and Evaluation of an In-Service Training Class in Music for Elementary Teachers." Unpublished Doctoral Dissertation, University of Oregon, 1961, (Ed.D.). (Univ. Micro. No. 61-4523; D.A. Vol. 22, 1519).

Glass, Phyllis. "The Effect of Favorable and Unfavorable Propaganda on the Rating of Classical Music by Students in the Seventh Grade General Music Class." Unpublished Master's Thesis, Univ. of Kansas, 1959, (M.M.E.).

Glenn, Neal. Teaching Music in Our Schools. Dubuque, Iowa: W. C. Brown, 1951.

Glenn, Neal E. "The Development and Organization of Materials and Methods for Student Teachers of Instrumental Music." Unpublished Doctoral Dissertation, Northwestern University, 1948, (Ph.D.).

Glenn, Neal E. "Research and Literature Related to Teaching Problems in Music Education." Illinois State Norm. Univ. Bull., 46: 211 (1948), 28-41. (P.A. Vol. 23, p. 231, No. 1922).

Glosser, Mort. M. "A Critical Analysis of Public School Instrumental Music from the Experimentalist's Viewpoint." Unpublished Doctoral Dissertation, Michigan State University, 1954, (Ed.D.). (Univ. Micro. No. A54-1230; D.A. Vol. 14, p. 841).

Goldman, Irwin J. "The Willingness of Music and Visual Art Students to Socially Undesirable and Psychopatholigical Characteristics." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1962, (Ph.D.). (Univ. Micro. No. 62-2864; D.A. Vol. 23, p. 732).

Goldman, Richard Franco. The Band's Music. New York: Pittman, 1938.

Goodkind, Herbert K. (Ed.) Cumulative Index 1915 through 1959 to The Musical Quarterly. New York: Goodkind Indexes, 1960.

Graham, Floyd Freeman. Public Relations in Music Education. New York: Exposition Press, Inc., 1954.

Graham, Percy. Vocal Music in the Elementary Schools. Boston: C. C. Birchard Co., 1950.

Granger, Robert L. "Studies Related to the Playing and Teaching of Brass Instruments." Unpublished Master's Thesis, New England Conservatory of Music, 1949, (M.M.).

Grant, Parks. Music for Elementary Teachers. New York: Appleton-Century-Crofts, Inc., 1951.

Granville, Charles N. The Voco Study Plan. Chicago: Gamble Hinged Music Co., 1931.

Graves, Richard M. Singing for Amateurs. London: Oxford Univ. Press, 1954.

Gray, Thomas L. "An Investigation of the Changes in Teaching Concepts of Student Teachers of Music." Unpublished Doctoral Dissertation, State University of Iowa, 1962, (Ph.D.). (Univ. Micro. No. 63-924; D.A. Vol. 13, p. 2935).

Green, John E. "School Music Services in State Departments of Education with Implications for California." Unpublished Doctoral Dissertation, University of Southern California, 1959, (Ed.D.). (Univ. Micro. No. 59-2937; D.A. Vol. 20, p. 1226).

Grover, Paul B. "The History of String Class Instruction in American Schools and Its Relationship to School Orchestra." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ed.D.). (Univ. Micro. No. 60-3924; D.A. Vol. 21, p. 1585).

Gustin, Molly Malcolmson. "Tonality." Unpublished Doctoral Dissertation, Indiana University, 1961, (Ph.D.). (Univ. Micro. No. 60-6953; D.A. Vol. 22, p. 281).

Hale, Noel. XXV Adventures: Exploration in String Instrumental Teaching. London: Ascherberg, Hopwood, and Crew, Ltd., 1953.

Hall, Jody (Joseph) C. "A Radiographic, Spectrographic and Photographic Study of the Non-Labial Physical Changes which Occur in the Transition from Middle to Low and Middle to High Registers During Trumpet Performance," Unpublished Doctoral Dissertation, Indiana University, 1954, (Ph.D.). (Univ. Micro. No. A54-3109; D.A. Vol. 14, p. 2086).

Hammond, W. A. A Bibliography of Aesthetics and of the Philosophy of the Fine Arts from 1900-1932. New York: Longmans, Green and Co., 1933.

Hansford, Charles H. "An Appraisal of the Group Singing of Sixth Graders, as Taught by Classroom Teachers, in Twenty-Five Elementary Schools in a Midwestern city of 100,000." Unpublished Doctoral Dissertation, University of Missouri, 1962, (Ed.D.). (Univ. Micro. No. 62-6430; D.A. Vol. 23, p. 2435).

Hare, Robert Y. "The Pedagogical Principles of Music Appreciation." Unpublished Dissertation, State University of Iowa, 1959, (Ph.D.). (Univ. Micro. No. 59-1682; D.A. Vol. 19, p. 3320).

Harrison, Peggy R. "An Experimental Study by X-Ray Analysis of Some Resonator Adjustments in Efficient and Inefficient Voice Production in Low Pitched Male Voices," Unpublished Doctoral Dissertation, Univ. of Southern California, 1957, (Ph.D.). (U.S.C. Micro. No. 497-E).

Hart, Lawrence E. "An Approach to a Practical Pedagogy of Piano Sight-Reading." Unpublished Doctoral Dissertation, University of Rochester, Eastman School of Music, 1958, (D.M.A.).

Hartman, Gertrude, and Ann Shumaker, (Eds.) Creative Expression: The Development of Children in Art, Music, Literature and Dramatics. (2nd ed.) Milwaukee: E. M. Hale and Co., 1939.

Hartshorn, William C. Music for the Academically Talented Student in the Secondary School. Washington, D.C.: Nat. Educ. Ass., 1960.

Haydon, Glen. Introduction to Musicology. New York: Prentice-Hall, 1941.

Hayes, Ernest. "A Study of the Problems of Space Allocation in New High School Buildings to Meet the Needs of the Various Departments." Unpublished Doctoral Dissertation, University of Washington, 1954, (Ed.D.). (Univ. Micro. No. A55-449; D.A. Vol. 15, p. 366).

Heller, Jack J. "The Effects of Formal Music Training on the Wing Musical Intelligence Scores." Unpublished Doctoral Dissertation, State Univ. of Iowa, 1962, (Ph.D.). (Univ. Micro. No. 63-927; D.A. Vol. 23, p. 2936).

Helseth, Inga O. Living in the Classroom. Edwards Brothers, Inc., Ann Arbor, Mich.: 1939.

Hendrickson, Gordon. "Needed Research in Music Education," J. Educ. Res., 31 (1938), 672-677.

Henry, Nelson B. (Ed.) Basic Concepts in Music Education. The 57th Yearbook of the Natl. Society for the Study of Education, Pt. II. Chicago: Univ. Chicago Press, 1958.

Henzie, Charles A. "Amplitude and Duration Characteristics of Snare Drum Tones." Unpublished Doctoral Dissertation, Indiana University, 1960, (Ed.D.). (Univ. Micro. No. 60-3001; D.A. Vol. 21, p. 640).

Hermann, Evelyn L. "A Comparison Study of the Sight-Reading Ability of Students Taught by the Music Specialist and of Students Taught by the General Teacher in a Self-Contained Classroom." Unpublished Doctoral Dissertation, University of Oregon, 1962, (Ed.D.). (Univ. Micro. No. 62-4950; D.A. Vol. 23, p. 1731).

Herter Norton, Mary D. The Art of String Quartet Playing. New York: Simon and Schuster, 1962.

Hevner, Kate. "Appreciation of Music and Tests for Appreciation of Music." In Studies in Appreciation of Art. Univ. of Oregon Publications, 4: 6 (1934), 83-151.

Hewitt, Helen(Ch.) Doctoral Dissertations in Musicology. Denton, Texas: Joint Committee, Music Teachers Nat. Ass. and Amer. Musicological Soc., 1952.

Hewitt, Helen.(Compiler). Doctoral Dissertations in Musicology. (2nd ed.) Baldwin, New York: Music Teachers Nat. Ass., Inc., 1958.

Hewitt, Helen. (Compiler) Doctoral Dissertations in Musicology. (3rd ed.) Philadelphia: Amer. Musicological Soc., 1961.

Hodgson, Percival. Motion Study and Violin Bowing. Urbana, Ill.: Amer. String Teachers Ass., 1958.

Hoffer, Charles R. "Research and the Music Teacher." Music Educ. J., 41 (November, 1954), 20-22.

Hoffren, James A. "The Construction and Validation of a Test of Expressive Phrasing in Music." Unpublished Doctoral Dissertation, University of Illinois, 1962, (Ed.D.).

Hohn, Robert W. "A Study of the Relationship Between Vowel Modification and Changes in Pitch in the Male Singing Voice: A Spectrographic Analysis, Reinforced by Judgments of Phonics Experts." Unpublished Doctoral Dissertation, Indiana University, 1959, (D.M.Ed.). (Univ. Micro. No. 59-5446; D.A. Vol. 20, p. 3770).

Hollien, Harry F. "A Study of Some Laryngeal Correlates of Vocal Pitch." Unpublished Doctoral Dissertation, State University of Iowa, 1955, (Ph.D.). (Univ. Micro. No. 55-1374; D.A. Vol. 15, p. 2340).

Hollingworth, Harry L. The Psychology of the Audience. New York: American Book Co., 1935.

Holmberg, Harry E. "Investigation and Evaluation of Audio-Visual Materials Pertaining to the Undergraduate Music Education Curriculum." Unpublished Doctoral Dissertation, Florida State University, 1953, (Ed.D.). (Univ. Micro. No. A53-446; D.A. Vol. 13, p. 241).

Hood, Marguerite V. and E. J. Schultz. Learning Music Through Rhythm. Boston: Ginn and Co., 1949.

Hopkins, L. T. "Classroom Experimentation in Functional Music." Yearbook of the Mus. Educ. Natl. Conference, 1936, 298-301. Chicago: The Conference, 1937.

Housewright, Wiley L. Music for Florida Children. Bulletin No. N41. Tallahassee, Fla: State Dept. Educ., 1954.

Hovey, Nilo. The Administration of School Instrumental Music. Rockville Center, N.Y.: Belwin, Inc., 1952.

Howerton, George. Technique and Style in Choral Singing. New York: Carl Fischer, 1957.

Hubbard, George E. Music Teaching in the Elementary Grades. New York: American Book Co., 1934.

Huls, Helen S. The Adolescent Voice: A Study. New York: Vantage Press, 1957.

Hummel, Lynn E. "The Music Experiences and Attitudes of Rural Children in Northeast Missouri." Unpublished Doctoral Dissertation, University of Missouri, 1950, (Ed.D.). (Univ. Micro. No. 2041; D.A. Vol. 10, p. 107).

Humphreys, Alfred W. "A Follow-up Study of the Graduates of the School of Music of the University of Illinois." Unpublished Doctoral Dissertation, University of Illinois, 1955, (Ed.D.). (Univ. Micro. No. 56-550; D.A. Vol. 16, p. 350).

Humphreys, Arthur F. "Emerging Concepts of Music Supervision." Unpublished Doctoral Dissertation, George Peabody College, 1958, (Ed.D.). (Univ. Micro. No. 59-1103; D.A. Vol. 19, p. 2971).

Hungerland, H. (Ed.) "Selective Current Bibliography for Aesthetics and Related Fields." J. Aesthet., 6: 4 (1948), 355-372.

Hungerland, H. (Ed.) "Selective Current Bibliography for Aesthetics and Related Fields, Jan. 1 - Dec. 31, 1948." J. Aesthet., 7: 4 (1949), 388-399.

Hungerland, H. (Ed.) "Selective Current Bibliography for Aesthetics and Related Fields." J. Aesthet., 9: 4 (1951), 349-362.

Hungerland, H. (Ed.) "Selective Current Bibliography for Aesthetics and Related Fields: January 1, 1961 - December 31, 1961." Journal of Aesthet., 20 (1962), 475-491.

Hunt, Reginald. School Music Method. London: Edwin Ashdown Ltd., 1957.

Index to American Doctoral Dissertations. Vols. 16-23 (1955-1963). Ann Arbor, Mich.: Univ. Microfilms, Inc.

The Instrumentalist. Vols. 1-17 (1946-1963). Evanston, Ill.: The Instrumentalist Co.

Jacobs, C. "Psychology of Music: Some European Studies." Acta Psychologica, 17, (1960), 275-97.

Jeans, J. H. (Sir James). Science and Music. Cambridge, Eng.: Univ. Press, 1937.

Jeans, J. H. (Sir James). Science et Musique. Paris: Hermann et Cie, 1939.

Jenkins, Thomas J. "The Organization and Administration of Activity Programs of Public Secondary Schools of Pennsylvania." Unpublished Doctoral Dissertation, Pennsylvania State University, 1956, (Ed.D.). (Univ. Micro. No. 57-441; D.A. Vol. 17, p. 275).

Jensen, Kai. "Needed Research: Music." Thirty-Eighth Yearbook, National Soc. for the Study of Educ., Part I, Bloomington, Ill.: Public School Pub. Co., 1939, pp. 135-151.

Jentges, James E. "An Experimental Study of Acoustical Efficiency in Classroom Environments." Unpublished Doctoral Dissertation, Stanford University, 1956, (Ed.D.). (Univ. Micro. No. 56-2897; D.A. Vol. 16, p. 1823).

Jersild, Arthur. Child Psychology. (3rd ed.) New York: Prentice-Hall, Inc., 1947.

Jersild, Arthur T. "Music" In Guy M. Whipple (Ed.) Thirty-eighth Yearbook, Natl. Soc. for the Study of Educ., Part I: Child Development and the Curriculum. Bloomington, Ill.: Pub. School Pub. Co., 1939, 135-51.

Johnson, Eric H. "Construction and Appraisal of Procedures and Materials for Developing Consensus Regarding Extra-Class Activities Programs." Unpublished Doctoral Dissertation, University of Illinois, 1952, (Ed.D.). (Univ. Micro. No. A53-165; D.A. Vol. 13, p. 44).

Jones, Archie N. Music Education in Action: Basic Principles and Practical Methods. Boston: Allyn and Bacon, Inc., 1960.

Jones, Archie N. "Basis of the New Curriculum: Research." Educ. Mus. Magazine. (March, 1943), 25.

Jones, Archie N. and George K. Evans. "Areas of Needed Research in Music Education." Education, 72 (September, 1951), 23-27.

Jones, Llewellyn B. Building the Instrumental Music Department. New York: C. Fischer, Inc., 1949.

Jordan, Wayne N. "Planning Music Facilities for the Secondary Schools." Unpublished Doctoral Dissertation, Stanford University, 1956, (Ed.D.). (Univ. Micro. No. 57-866; D.A. Vol. 17, p. 544).

The Journal of the Acoustical Society of America. Vol. 1-35 (1929-1963). Lancaster, Pa.: Amer. Inst. of Physics.

Journal of Aesthetics and Art Criticism. Vols. 1-20 (1941-1962). Cleveland, Ohio: Amer. Soc. for Aesthetics at Cleveland Museum of Art and Western Reserve Univ.

Journal of the American Musicological Society. Vols. 1-17 (1948-1964). Richmond, Va.: William Byrd Press.

Journal of Educational Psychology. Vols. 21-53 (1930-1962). Washington, D.C.: Amer. Psychol. Ass., Inc.

Journal of Experimental Psychology. Vols. 1-64 (1916-1962). Washington, D.C.: Amer. Psychol. Ass., Inc.

Journal of Human Relations. Vols. 1-11 (1952-1963). Wilberforce, O.: Central State Coll.

The Journal of Musicology, Vol. 1-5 (1939-1943). Greenfield, O.: Music Science Press.

Journal of Music Theory. Vols. 1-5 (1957-1961). New Haven, Conn.: Yale School of Music.

Journal of Personality. Vols. 1-13 (1932-1945). Durham, N.C.: Duke Univ. Press.

Journal of Research in Music Education, Vol. 1-10 (1953-1962). Washington D.C,: Music Educ. Natl. Conf.

Journal of Social Psychology. Vols. 1-58 (1930-1962). Provincetown, Mass.: The J. Press.

The Journal of Speech and Hearing Disorders, Vol. 1-23 (1936-1958). Columbus, O.: Amer. Speech Ass.

Judson, Lyman S., and Andrew T. Weaver. Voice Science. New York: F. S. Crofts and Co., 1942.

Julian, W. J. "Improvability of Timbre Discrimination." Unpublished Doctoral Dissertation, Northwestern University, 1954, (Ph.D.). (Univ. Micro. No. A54-2582; D.A. Vol. 14, p. 1756).

Julliard School of Music, New York. The Julliard Report on Teaching Literature and Materials of Music. New York: W. W. Norton and Co., 1953.

Jung, Joseph W. "A Study of the Factors Associated with Music Participation by Secondary School Pupils in the Suburban Areas of Minneapolis and St. Paul." Unpublished Doctoral Dissertation, University of Minnesota, 1954, (Ph.D.). (Univ. Micro. No. A54-2983; D.A. Vol. 14, p. 2007).

Juzek, Robert. The Simplicity of Violin Playing, Volumes I and II. New York: Metropolitan Music Co., 1949.

Kagen, Sergius. "On Studying Singing." In Ernest Hutcheson (ed.) The Field of Music. New York: Rinehart & Co., Inc., 1950.

Katz, Adele T. "Heinrich Schenker's Method of Analysis." Musical Quart., 21, (1935), 311-29.

Keller, Horace T., Jr. "Personality Measures as Related to Performance Under Auditory Distraction." Unpublished Doctoral Dissertation, Temple University, 1956.

Kelly, D.T. "Study of the Musical Preferences of a Select Group of Adolescents." J. of Res. in Music Educ., 9:2 (Fall, 1961), 118-24.

Kimscella, Hazel G. (Compiler). "Americana Index to the Musical Quarterly." J. of Res. in Music Educ., 6:2 (Fall, 1958), 25-144.

King, A. Hyatt. "Recent Work in Music Bibliography." The Library, 26:2,3, (Sept.-Dec. 1945), 122-48, Fourth Series.

Kinney, Jo Ann Smith. "Temporal Discrimination in Different Types of Auditory Patterns." Unpublished Doctoral Dissertation, University of Connecticut, 1959, (Ph.D.). (Univ. Micro. No. 59-3841; D.A. Vol. 20, p. 1450).

Kinscella, Hazel G., and Elizabeth M. Tierney. Music in the Small School. Lincoln, Neb.: Univ. of Neb. Press, 1939.

Kirkpatrick, William C., Jr. "Relationships between the Singing Ability of Prekindergarten Children and Their Home Musical Environment." Unpublished Doctoral Dissertation, University of Southern California, 1962, (Ed.D.). (Univ. Micro. No. 62-3736; D.A. Vol. 23, p. 886).

Kjerstad, Clara. "A Summary of Investigations in Music Education." Unpublished Master's Thesis, Northwestern University, 1932.

Kopp, George W. "The Effects of Stimulating and Relaxing Music on Children Taking a Fourth Grade Arithmetic Test." Unpublished Doctoral Dissertation, Syracuse University, 1958, (Ed.D.). (Univ. Micro. No. 58-7225; D.A. Vol. 20, p. 687).

Kraus, Egon. (Ed.). The Present State of Music Education in the World. Washington: Internat. Soc. for Music Educ., 1960.

Krevit, William. Music for Your Child. New York: Dodd, Mead & Co.

Kromminga, Louis U. "Characteristics and Curriculum Evaluations of Bachelor and Master of Music Degree Graduates from the University of Texas (1948-1957)." Unpublished Doctoral Dissertation, University of Texas, 1959, (Ph.D.). (Univ. Micro. No. 59-2489; D.A. Vol. 20, p. 575).

Krone, Beatrice Perhan. Music in the New School. Park Ridge, Ill.: Neil A. Kjos Music Co., 1937.

Krone, Beatrice, and Max Krone. Music Participation in the Elementary School. Park Ridge, Ill.: Neil A. Kjos Music Co., 1952.

Krone, Beatrice, and Kurt Miller. Help Yourself to Music. San Francisco: H. Chandler, 1959.

Krummel, D. W. and J. B. Coover. "Current National Bibliographies Their Music Coverage." Music Library Association Notes, 17 (June, 1960), 375-393.

Kuhn, Wolfgang E. Principles of String Class Teaching. Rockville Centre, N.Y.: Belwin, Inc., 1957.

Kurth, Ernst. Musikpsychologie. Bern: Krompholy, c. 1947.

Kwalwasser, Jacob. "Curriculum Investigations at the Elementary and Secondary School Levels: Music." Rev. of Educ. Res., 4 (1934), 175-78.

Kwalwasser, Jacob. "Curriculum Investigations: Music." Rev. of Educ. Res., 7 (1937), 130-31.

Kwalwasser, Jacob. "Curriculum Investigations: Music." Rev. Educ. Res., 7:2 (April,1937), 191-92.

Kwalwasser, Jacob. Exploring the Musical Mind. New York: Coleman-Ross, 1955.

Kwalwasser, Jacob. "Music." In Mary D. Barnes, (Ch.), Implications of Research for the Classroom Teacher, Joint Yearbook, American Educational Research Association and Department of Classroom Teachers, N.E.A., (1939), 254-58.

Kwalwasser, Jacob. Problems in Public School Music. New York: Witmark, 1932.

Kwalwasser, Jacob. "Recent Research in Music Education at Syracuse University." Yearbook of the Music Educators National Conference, 1939-40. Washington: Music Educ. Nat. Conf., 1940, 89-92.

Kwalwasser, Jacob. "What Can Children Teach Us About Teaching Children?" Music Educ. J., 21 (October, 1934), 23-24.

Kyme, George H. "Music Education." Rev. Educ. Res., 31 (April, 1961), 208-216.

Lamek, John E. Music Instruction in Catholic Elementary Schools. Washington, D.C.: Catholic Univ. of Amer. Press, 1933.

Landeck, Beatrice. Children and Music. New York: Sloane, 1952.

Langer, Susanne K. Feeling and Form. New York: Charles Scribner's Sons, 1953.

Langsford, Harry M. "An Experimental Study of the Effect of Practice Upon Improvement in Melodic Dictation." Unpublished Doctoral Dissertation, Michigan State University, 1959, (Ph.D.). (Univ. Micro. No. 60-1715; D.A. Vol. 20, p. 4679).

Larson, William S. Bibliography of Research Studies in Music Education, 1932-1948. Washington,D.C.: Music Educators Natl. Conf., 1949.

Larson, William S. Bibliography of Research Studies in Music Education, 1949-1956. Washington, D.C.: Music Educ. Natl. Conf., 1957.

Larson, William S. "Microcard Publications in Music Education." J. of Res. in Music Educ., 2 (Spring, 1954), 38.

Larson, William S. "Present Status of Research in Music Education." Educ. Mus. Magazine, 24 (November, 1944), 16-17.

Larson, William S. "Research Studies in Music Education." Music Educ. J., 36 (February, 1950), 48; 36 (June-July, 1950), 41-42; 37 (January, 1951), 40; 37 (April, 1951), 60; 38 (April, 1952), 36; 38 (June, 1952), 40-42; 39 (September, 1952), 52; 39 (November, 1952), 40; 39 (January, 1953), 44; 39 (April, 1953), 50; 39 (June, 1953), 48; 40 (September, 1953), 44; 40 (April, 1954), 50; 41 (January, 1955), 38-39; 41 (February, 1955), 56; 41 (April, 1955), 52-54; 41 (June, 1955), 34; 42 (September, 1955), 40; 42 (November, 1955), 44; 42 (February, 1956), 62-63; 43 (September, 1956), 58-60.

Larson, William S. "Some Recent Trends in Music Education." Education, 56 (May, 1936), 513-20.

LaSalle, D. Rhythms and Dances for Elementary Schools (rev. ed.). New York: A. S. Barnes, 1951.

Latherow, Robert L. "An Overview of Teaching Vocal Music for the Elementary Schools." Unpublished Doctoral Dissertation, Teachers College, Columbia Univ., 1962, (Ed.D.). (Univ. Micro. No. 63-2266; D.A. Vol. 23, p. 4379).

LeBow, Mary Ruth T. "University Organization for the Undergraduate Education of Music Teachers." Unpublished Doctoral Dissertation, Wayne State University, 1960, (Ed.D.). (Univ. Micro. No. 60-2330; D.A. Vol. 21, p. 130).

Leeder, Joseph A., and William S. Haynie. Music Education in the High School. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1958.

Leedy, Clifford E. "The Background Philosophy and Prinicples of Public School Music Education and Its Supervision." Unpublished Doctoral Dissertation, University of Washington, 1941, (Ph.D.).

Lehman, Dave R. "The Harmonic Structure of the Tone of the Bassoon." Unpublished Doctoral Dissertation, University of Michigan, 1962, (Ph.D.). (Univ. Micro. No. 63-390; D.A. Vol. 23, p. 1733).

Lehmann, Lilli. How To Sing. New York: The MacMillan Co., 1942.

Leighton, Ralph W. (Ed.). Studies in Appreciation of Art. Eugene, Ore.: Univ. of Ore., 1934.

Leland, Valborg. The Dounis Principles of Violin Playing. London: The Strad, 1949.

Lener, Jeno. The Technique of String Quartet Playing, 1935. London: J. and W. Chester Ltd., 1935.

Leonhard, Charles. "Music." Rev. Educ. Res. 25 (April, 1955), 166-175.

Leonard, Charles. "Research: Philosophy and Esthetics." J. of Res. in Music Educ., 3 (Spring, 1955), 23-26.

Leonard, Charles. A Song Approach to Music Reading. New York: Silver Burdett Co., 1953.

Leonhard, Charles, and Robert W. House. Foundations and Principles of Music Education. New York: McGraw-Hill Book Co., 1959.

Lesher, Thomas M. "Anxiety Reduction as a Function of Musically Controlled Projection Rate." Unpublished Doctoral Dissertation, Pennsylvania State Univ., 1957, (Ph.D.). (Univ. Micro. No. 25-087).

Lewis, Kenneth L. "Strengths and Weaknesses of Selected Elementary School Programs in Oklahoma." Unpublished Doctoral Dissertation, University of Oklahoma, 1958, (Ed.D.). (Univ. Micro. No. 58-593; D.A. Vol. 18, p. 1353).

Lidral, Frank W. "A Study in the Pedagogy of Melodic Dictation." Unpublished Doctoral Dissertation, University of Rochester, 1956, (Ph.D.).

Lieberman, Maurice. Ear Training and Sight Singing. New York: W. W. Norton and Co., 1959.

Lindgren, Frank E. "A Content Analysis of Research Studies in Vocal Music Education at the University of Southern California from 1930-1955, with a View of Establishing Areas of Needful Research." Unpublished Master's Thesis, University of Southern California, 1956 (M.M.).

Link, Virginia L. "Determining the Desirable Music Experiences that Should be Included in the Training of Elementary Teachers for Texas Schools." Unpublished Doctoral Dissertation, University of Texas, 1954, (Ph.D.).

Lloyd, Llewelyn S. Decibels and Phons: A Musical Analogy. New York: Oxford Univ. Press, 1938.

Long, Noel. Music in English Education. London: Faber and Faber Co., 1959.

Luce, John R. "Sight-Reading and Ear-Playing Abilities Related to the Training and Background of Instrumental Music Students." Unpublished Doctoral Dissertation, University of Nebraska Teachers College, 1958, (Ed.D.). (Univ. Micro. No. 58-5901; D.A. Vol. 19, p. 1629).

Ludwig, Elizabeth A. "A Critical Evaluation of the Program of Contemporary Secondary Schools in Order to Determine Opportunities they Provide for Leisure-Time Education." Unpublished Doctoral Dissertation, New York University, 1954, (Ph.D.). (Univ. Micro. No. A54-2327; D.A. Vol. 14, p. 1585).

Lundin, Robert W. An Objective Psychology of Music. New York: Ronald Press, 1953.

McCarthy, Alice V. "Teaching Problems in Junior High School Vocal Music." Unpublished Master's Thesis, State University of Iowa, 1937, (M.A.).

McClure, Theron R. Teaching the String Bass. Columbus, O.: Coll. of Educ., Ohio State Univ., 1961.

McDougall, Stanley D. "The Use and Functions of Multi-Purpose Rooms in Santa Clara County, California." Unpublished Doctoral Dissertation, Stanford University, 1957, (Ed.D.).

McEachern, Edna. A Survey and Evaluation of the Education of School Music Teachers in the United States. New York: Teachers Coll., Columbia Univ., 1937.

McIntyre, Barbara M. "The Effect of a Program of Creative Activities upon the Consonant Articulation Skills of Adolescent and Pre-Adolescent Children with Speech Disorders." Unpublished Doctoral Dissertation, University of Pittsburg, 1957, (Ph.D.).

McKay, George F. "Range of Musical Experience." In Nelson B. Henry (Ed.), Basic Concepts in Music Education, Fifty-Seventh Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1958, pp. 123-139.

McKenzie, Duncan. Training the Boy's Changing Voice. New Brunswick, N.J.: Rutgers Univ. Press, 1956.

McKenzie, Duncan. Music in the Junior School. New York: Oxford Univ. Press, 1930.

McKinney, Fred. Psychology of Personal Adjustment: Student's Introduction to Mental Hygiene. New York: J. Wiley & Sons, Inc.

McMurray, Foster. "A Pragmatic Approach to Certain Aspects of Music Education." J. of Res. in Music Educ., 4 (Fall, 1956), 103-12.

Mack, Raymond W., Linton Freeman, and Seymour Yellen. Social Mobility: Thirty Years of Research and Theory; an Annotated Bibliography. Syracuse, N.Y.: Syracuse Univ. Press, 1957.

MacLatchy, Josephine H. "Music, Nursery-School and Kindergarten Methods, and Integration of Subjectmatter." Rev. Educ. Res., 1 (1931), 294-297.

MacOwan, Thomas D. "Pressures that are brought to Bear upon Certain Activities of Public Secondary Schools of Indiana by Non-School Affiliated Adult Interest Organizations." Unpublished Doctoral Dissertation, Indiana University, 1955, (Ed.D.). (Univ. Micro. No. 55-1004; D.A. Vol. 15, p. 2131).

Madsen, Farrell D. "A Study of the Competencies of Utah Junior High School Music Teachers." Unpublished Doctoral Dissertation, University of Oregon, 1957, (Ed.D.). (Univ. Micro. No. 58-5230; D.A. Vol. 19, p. 2545).

Magnuson, Cleone Q. "An Investigation in the Change of Musical Taste Based on Owned Recording Collections." Unpublished Master's Thesis, Northwestern University, 1959, (M.M.).

Malek, Vincent F. "A Study of Embouchure and Trumpet-Cornet Mouthpiece Measurements." Unpublished Doctoral Dissertation, Northwestern University, 1953, (Ph.D.). (Univ. Micro. No. A53-2077; D.A. Vol. 13, p. 1217).

Maraffie, Bertha N. "Identification of Critical Elements Associated with the Development of Effective String Programs in Pennsylvania Public Schools." Unpublished Doctoral Dissertation, Pennsylvania State University, 1961, (Ph.D.). (Univ. Micro. No. 51-234; D.A. Vol. 22, No. 11).

Marquis, James H. "A Study of Interval Problems in Sight-Singing Performance with Consideration of the Effect of Context." Unpublished Doctoral Dissertation, State University of Iowa, 1963, (Ph.D.). (Univ. Micro. No. 63-4748; D.A. Vol. 24, pp. 767-768).

Marshall, Harvey. "Techniques for Teaching High School a Cappella Choir: A Study of Six Groups Rated by Ten Judges from Recordings Made Under Controlled Conditions After Ten Weeks of Classroom Observation with Conclusions Affecting Teaching Procedure." Unpublished Doctoral Dissertation, Stanford University, 1950, (Ed.D.).

Marshall, Madeleine. The Singer's Manual of English Diction. New York: G. Schirmer, Inc., 1953.

Marvel, Lorene M. The Music Consultant at Work. New York: Bureau of Pub., Teachers Coll., Columbia Univ., 1960.

Maryland State Department of Education. Music in Our Maryland Schools. Baltimore, Md.: Maryland State Dept. of Ed., 1959.

Mason, Chester W. "Comparison of Elementary and Junior High School Classroom Music." Unpublished Doctoral Dissertation, Stanford University, 1953, (Ed.D.). (Univ. Micro. No. A53-1378; D.A. Vol. 13, p. 735).

Masters Theses in Education. Vols. 1-12 (1951-1963). Cedar Falls, Ia.: Bureau of Res., State Coll. of Iowa.

Mathews, Paul W. You Can Teach Music. New York: E. P. Dutton & Co., Inc., 1953.

Mathis, George R. "A Study of Music Teacher Preparation at Illinois Wesleyan University." Unpublished Doctoral Dissertation, University of Illinois, 1962, (Ed.D.). (Univ. Micro. No. 62-6187; D.A. 23, p. 2936).

Maxwell, Ezra H. "A Study of the Effectiveness of an Intergroup Education Program in Choral Music Classes." Unpublished Master's Thesis, San Diego State College, 1952, (M.A.).

Mayeske, George W. "Some Associations of Musical Preference Dimensions of Personality." Unpublished Doctoral Dissertation, University of Illinois, 1962, (Ph.D.). (Univ. Micro. No. 62-6188; D.A. Vol. 23, p. 3468).

Mayfarth, Frances (Ed.). Children and Music. Washington, D.C.: Ass. for Childhood Educ., 1948.

Mayne, Thomas R. Music in the Modern School. London: J. M. Dent and Sons, Ltd., 1935.

Melvin, A. G. The Activity Program. New York: Reynal and Hitchcock, 1936.

Mendel, Arthur, et al. (Ed.). Papers Read at the 1939 International Congress of Musicality. New York: Music Educators Natl. Conf., 1939.

Mendez, Rafael. Prelude to Brass Playing. Boston: Carl Fischer, Inc., 1949.

Merriam, Alan P. "An Annotated Bibliography of Theses and Dissertations in Ethno-Musicology and Folk Music Accepted at American Universities." Ethnomusicology, 4:1 (1960), 22-35.

Meyer, Max F. How We Hear: How Tones Make Music. Boston, Mass.: C. T. Branford, 1950.

Michel, A. "Bibliography of Psychoanalysis of Music and Musicians." Samiksa, 8 (1954). 222-234. (P.A. Vol. 29, p. 787, No. 8447).

Miles, James B. "An Analysis of Relationships between Experiences in Correlated Courses in Art, Music, and Modern Dance, and Certain Behavioral Changes Related to Aesthetic Experience." Unpublished Doctoral Dissertation, North Texas State University, 1962, (Ed.D.). (Univ. Micro. No. 63-1415; D.A. Vol. 23, p. 3309).

Miller, Robert W. "An Experimental Study of the Evaluation by Untrained Listeners of Efficient and Inefficient Voice Production as to Quality." Unpublished Doctoral Dissertation, University of Southern California, 1957, (Ph.D.).

Mills, John. A Fugue in Cycles and Bels. New York: Van Nostrand, 1935.

Modisett, Katherine Carpenter. "Bibliography of Sources, 1930-1952, Relating to the Teaching of Choral Music in Secondary Schools." J. of Res. in Music Educ., 3:1 (Spring, 1955), 51-60.

Monroe, Walter S., and Louis Shores. Bibliographies and Summaries in Education to July, 1935: A Catalog of More than 4000 Annotated Bibliographies and Summaries Listed under Author and Subject in One Alphabet. New York: H. W. Wilson Co., 1936.

Montell, Marjorie. Montell Vocal Technique. Miami, Fla.: Montell Found., 1950.

Moore, E. The Brass Book. Kenosha, Wis.: G. LeBlanc Co., 1954.

Moore, Milton W. "The Function and Responsibilities of a State Music Supervisor for South Carolina." Unpublished Project Report, Teachers College, Columbia University, 1956, (Ed.D.).

More, Grace Van Dyke. "Music." Rev. of Educ. Res., 2 (1932), 66.

More, Grace Van Dyke. "Special Methods on High School Level: Music." Rev. of Educ. Res., 2 (1932), 66.

Morgan, H.B.N. "Research in Music Education." Educ. Music Magazine, 31 (January, 1952), 25.

Morgan, H. N. "Research in Instrumental Music." Instrumentalist, 14 (December, 1959), 37.

Morgan, Hazel N. (Ed.). Music Education Source Book. Chicago: Music Educ. Nat. Conf., 1947.

Morgan, Hazel N. (Ed.). Music in American Education: Source Book II. Washington, D.C.: Music Educ. Nat. Conf., 1955.

Morgan, R. V. "Music in School Instruction." Rev. of Educ. Res., 13 (1943), 200-04.

Morgan, Russell, and Hazel N. Morgan. Music Education in Action. Chicago: Neil A. Kjos Music Co., 1954.

Morris, Bertram. The Aesthetic Process. Evanston, Ill.: Northwestern Univ., 1943.

Morrison, Linda L. "A Study of the Attitudes, Likes, and Dislikes of High School Students Toward Music." Unpublished Master's Thesis, University of Texas, 1960, (M.M.).

Moses, Paul J. The Voice of Neurosis. New York: Grune and Stratton, 1954.

Mueller, Kate Hevner. "Studies in Music Appreciation: I. A Program of Testing; II. Measuring the Listener's Recognition of Formal Music Structure; III. Experimental Analysis of the Process." J. Res. Music Educ., 4 (Spring), 1956, 3-25.

Murphy, Gardner, Lois B. Gardner, and Theodore M. Newcomb. Experimental Social Pschology. New York: Harper & Brothers, 1931.

Mursell, James L. Education for Musical Growth. Boston: Ginn & Co., 1948.

Mursell, James L. "Growth Gradient in Music." Music Educ. J., 34, (November-December, 1947), 18-19.

Mursell, James L. Human Values in Music Education. New York: Silver Burdett Co., 1934.

Mursell, James L. Music in American Schools. New York: Silver Burdett Co., 1943.

Mursell, James L. Music and the Classroom Teacher. New York: Silver Burdett Co., 1951.

Mursell, James L. Music Education: Principles and Programs. Morristown, N.J.: Silver Burdett Co., 1956.

Mursell, James L. "Psychological Research in Music Education." Advanced School Digest, 5 (1940), 73-76.

Mursell, James L. "Psychological Research Bearing on Music Education." Music Educ. J., 22 (November, 1935), 24-25.

Mursell, James L. "Psychology of Music." Psychol. Bull., 29 (1932), 218-241.

Mursell, James L. The Psychology of Music. New York: W. W. Norton and Co., 1937.

Mursell, James L. and Mabelle Glenn. The Psychology of School Music Teaching. New York: Silver Burdett Co., 1931.

Mursell, James L. and Thurber Madison. "Psychology and Methods in the High School and College: Music." Rev. of Educ. Res., 8 (1938), 58-59.

Music and Letters. Vols. 23-43 (1942-1962). London: Music and Letters Ltd.

Music Educators Journal, Vols. 13-39 (1926-1953). Washington: Music Educ. Natl. Conf.

Music Educators National Conference. Bibliography of Research Studies in Music Education 1932-1944. Iowa: State Univ. of Iowa Press, 1944.

Music Educators National Conference. Music Education for Elementary School Children. Washington, D.C., Music Educators Natl. Conf., 1960.

Music Educators National Conference. Music in the Elementary School. Chicago: Music Educ. Natl. Conf., 1951.

Music Educators National Conference. The Music Teacher and Public Relations: A Report Prepared for the Music in American Life Commission on Music in School Administration by the Committee on Public Relations in Music Education, Edward J. Hermann, Ch. Washington D.C.: Music Educ. Natl. Conf., 1958.

Music Educators National Conference. Commission on Accreditation and Certification in Music Education. Music Education in the United States. Washington, D.C.: Music Educators Natl. Conf., 1958.

Music Educators National Conference: Committee on Graduate Study in Music Education. "Graduate Study in Music Education." J. Res. Music Educ., 2 (Fall, 1954), 168.

Music Educators National Conference: Committee on Music Rooms and Equipment. Music Buildings, Rooms, and Equipment. Washington, D.C.: Mus. Educ. Natl. Conf.,

Music Educators National Conference: Committee on Research Studies in Music Education. Bibliography of Research Studies in Music Education, 1932-1944., compiled by W. Larson., ed. by Arnold Small. Chicago: Music Educ. Natl. Conf., 1944.

Music Educators National Conference: Music in American Life Commission. Music Education in a Changing World: Music in the Community., Ed. Max Kaplan. Washington, D. C.: Music Educ. Natl. Conf., 1958.

Music Educators National Conference: Music in American Life Commission. Music in the Senior High School. Washington: Music Educators Natl. Conf., 1959.

Music Educators National Conference: Music in American Life Commission on Standards of Literature and Performance: Committee on Literature and Interpretation of Music for Choral Organizations, (Helen M. Hosmer, Ch.). Small Vocal Ensembles. Washington, D.C.: Music Educ. Natl. Conf., 1958.

Music Educators National Conference: Music in American Life Commission, Committee on Music in Nursery and Kindergarten. Musician Preschool, Kindergarten, and Elementary School. Washington: Mus. Educ. Natl. Conf., 1958, 30.

Music Educators National Conference, Northwest Division, "Northwest Division Bibliography of Music Materials." Washington, D.C.: The Committee, 1961.

Music Educators National Conference, Research Council. "Graduate Studies Cooperative Project." Music Educ. J., 37 (November, 1950), 29, 52-53.

Music Educators National Conference Research Council. Music Supervision and Administration in the Public Schools. Washington: Music Educ. Natl. Conf., 1949.

Music Educators National Conference, Southern Division. Bibliography of Research Studies in Music and Music Education. Ashville, N.C.: The Council, 1961.

Music Educators National Conference Yearbook (1934-1940). Chicago: The Conference.

The Music Index. Vols. 1-14 (1949-1962). Detroit, Mich.: Information Service, Inc.

Music Supervisors National Conference Yearbook: 1930-1933. Chicago: Music Supervisors Natl. Conf.

Music Therapy. (1951-62). Lawrence, Kansas: The Natl. Ass. for Music Therapy.

The Musical Quarterly. Vols. 1-49 (1915-1963). New York: G. Schirmer, Inc.

Myers, Allen. "Music as a Therapeutic Agent in the Rehabilitation of Physically Handicapped Children with Special Reference to Cerebral Palsy and a Survey of Music Education and Music Therapy in Facilities Educating Physically Handicapped Children." Unpublished Doctoral Dissertation, University of Iowa, 1954, (Ph.D.).

Myers, Louise Kifer. Music Fundamentals Through Song. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1954.

Myers, Louise Kifer. Teaching Children Music in the Elementary School. New York: Prentice-Hall, Inc., 1950.

National Association of Secondary School Principals. The Function of Music in the Secondary School Curriculum. Washington, D.C.: Natl. Ass. of Secondary Sch. Principals, 1952.

National Association of Teachers of Singing: Bulletin. Vols. 2-7, 9-20, (1946-1964). Waukegan, Ill.: Natl. Ass. Teach. of Singing, Inc.

National Council on Schoolhouse Construction. Guide for Planning School Plants. Nashville, Tenn.: George Peabody Coll. for Teachers, 1949.

National Education Association, Research Division. Music and Art in the Public Schools. Washington, D.C.: Natl. Educ. Ass., 1963.

National Society for the Study of Education. Basic Concepts in Music Education. Chicago: Univ. of Chicago Press, 1958.

National Society for the Study of Education Yearbook 35, Part II. Music Education. Bloomington, Ill.: Pub. Sch. Pub. Co., 1936.

Nature. Vols. 125-196 (1930-1962). New York: St. Martin's Press, Inc.

Neumann, Frederick C. "Survey of the Basic Doctrines of Violin Left Hand Technique." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1952, (Ph.D.). (Univ. Micro. No. 4225; D.A. Vol. 12, pp. 632-633).

Newman, Elizabeth. The Beginners Own Book. New York: Carl Fischer, Inc., 1947.

Newman, Elizabeth. How To Teach Music to Beginners. New York: Carl Fischer, Inc. 1957.

Newman, Millard J. "Criteria for Departmental Self-Appraisal of Music Teacher Education." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1958, (Ed.D.). (Univ. Micro. No. 59-1112; D.A. Vol. 19, p. 2973).

Nicoll, Irene H., and Charles M. Dennis. Simplified Vocal Training. New York: Carl Fischer, Inc.,1940.

Noble, Clyde E. The Psychology of Cornet and Trumpet Playing. Missoula, Mont.: The Mountain Press, 1964.

Nordholm, Harriet, and Ruth V. Bakewell. Keys to Teaching Junior High School Music. Minneapolis, Minn.: Paul A. Schmitt Music Co., 1953.

Normann, Theodore F. Instrumental Music in the Public Schools. Philadelphia: Oliver Ditson Co., 1941.

Norton, Alma M. Teaching School Music. Los Angeles: C. C. Crawford, 1932.

Nye, Robert E., and Bjornar Bergethon. Basic Music for Classroom Teachers. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1954.

Nye, Robert E., and Bernice T. Nye. Music in the Elementary School. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1957.

Ogden, Robert Morris. The Psychology of Art. New York: Charles Scribner's Sons, 1938.

Ohio State University Commencement, 1950-1963. (Inc. degrees, addresses, and titles of Dissertations).

Olson, Harry F. Musical Engineering. New York: McGraw-Hill Book Co., 1952.

Orshan, Herbert A. "The General Music Course in New York City High Schools: A Formulation of Objectives for the Required General Music Course, with Recommendations for Improved Teaching and Administrative Practices." Unpublished Doctoral Dissertation, New York University, 1959, (Ed.D.). (Univ. Micro. No. 59-6227; D.A. Vol. 20, p. 4018).

Ortmann, Otto. "Contribution of Physiopsychology to Musicology." Music Teachers National Ass. Proc., 1936, p. 213-217. (P.A. Vol. 12, p. 39, No. 426).

Ortmann, Otto. "Notes on Recent Music Research." In Karl W. Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association, Twenty-ninth Series. Oberlin, O.: The Association, 1935, 94-108.

Osborne, Charles E. "Pedagogical Application of Flute Study to Teachers Needs." Unpublished Doctoral Dissertation, Michigan State University, 1962, (Ph.D.). (Univ. Micro. No. 62-4454; D.A. Vol. 23, p. 1382).

Ostwald, Peter F. Soundmaking: The Acoustic Communication of Emotion. Springfield, Ill.: Charles C. Thomas. 1963.

Otto, Richard A. "A Critical Analysis of the Music Curriculum in Senior High Schools in Communities of 25,000 to 75,000 in the State of Connecticut." Unpublished Doctoral Dissertation, University of Connecticut, 1957, (Ph.D.). (Univ. Micro. No. 57-4234; D.A. Vol. 17, p. 2631).

Palmer, Harold G. Teaching Techniques of the Woodwinds. Rockville Centre, N.Y.: Belwin, Inc., 1952.

Pate, John E. "Practices and Opinions Regarding Pre-Service Preparation for Teachers of Emotionally Disturbed Children." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1960, (Ed.D.).

Patnoe, Herbert D. "Preparation of Public School Music Teachers in Selected Cities Maintaining Professional or Semi-Professional Civic Orchestras. (Research Study No.1)" Unpublished Doctoral Dissertation, Colorado State College, 1962, (Ed.D.). (Univ. Micro. No. 63-1127; D.A. Vol 23, p. 3922).

Patterson, Charles H. "An Experimental Study of the Effect of Soothing Background Music on Observed Behavior Indicating Tension of Third Grade Pupils." Unpublished Doctoral Dissertation, University of Virginia, 1959, (Ed.D.).

Pence, John R. "Theoretical Considerations and Illustrative Approaches in Professional Education Methods Course for Teachers of Music." Unpublished Doctoral Dissertation, University Illinois, 1962, (Ed.D.). (Univ. Micro. No. 62-6204; D.A. Vol. 23, p. 2810).

Pepinsky, Abe. "The Nature of Rhythmic Response." In Theodore M. Finney (Ed.), Volume of Proceedings of the Music Teachers National Association, Fourtieth Series. Pittsburgh, Pa.: The Association, 1946, 321-29.

Pepinsky, Abe. "Psychological Experiments in Music." Amer. Music Teacher, 1, (November, December, 1951), 2-3.

Pepinsky, Minerva. "Sixth-Grade Children's Attitudes Toward Music of Gluck, Haydn, Mozart and Toward Other Music." Unpublished Doctoral Dissertation, University Indiana, 1959, (Ed.D.). (Univ. Micro. No. 59-5318; D.A. Vol. 20, p. 3771).

Perry, Murvin H. "Reading, Listening and Viewing Behavior of Children in Grades Five through Twelve in the Tipton, Iowa Public Schools." Unpublished Doctoral Dissertation, State University of Iowa, 1959, (Ph.D.). (Univ. Micro. No. 59-5731; D.A. Vol. 20, 2272).

Peterson, Abel J. "The Scientific Rationale of Voice Production made Applicable in Principle and Method to the Teaching of the College Voice Class." Unpublished Doctoral Dissertation, University of Oregon, 1959, (Ed.D.). (Univ. Micro. No. 59-654; D.A. Vol. 19, p. 2358).

Peterson, Paul W. Natural Singing and Expressive Conducting. Winston-Salem, N.C.: John F. Blair, 1955.

Phelps, R. P. "Research in Music and Music Education." Music Educ. J., 46 (June, 1960), 51-3.

Phi Delta Kappa. Research Studies in Education, (1941-1962). Bloomington, Ind.: Phi Delta Kappa, Inc.

Phifer, James W. "An Appraisal of Music Education in Knoxville and Knox County Schools, 1961-1962." Unpublished Doctoral Dissertation, University of Tennessee, 1962, (Ed.D.). (Univ. Micro. No. 63-4108; D.A. Vol. 23, p. 4707).

Philadelphia Bibliographical Center and Union Library Catalogue. Union List of Microfilms, Cumulation 1949-1959, (2 vols.). Ann Arbor: J. W. Edwards, 1961.

Philadelphia Bibliographical Center and Union Library Catalogue Committee on Microphotography. Union List of Microfilms: A Basic List of Holdings in the United States and Canada. (plus Supplements 1-5, 1942-1946). Philadelphia: The Center, 1942.

Picerno, Vincent J. "Personal Characteristics of Some Successful Music Teachers in Erie County, New York." Unpublished Doctoral Dissertation, Northwestern University, 1955, (Ed.D.). (Univ. Micro. No. 56-115; D.A. Vol. 16, p. 74; P.A. Vol. 31, p. 326, No. 3843).

Pierce, Anne E. "Music." Elementary Sch. J., 34 (1933), 217-218.

Pierce, Anne E. "Selected References on Secondary School Instruction: Music." Sch. Rev., 41 (1933), 222-223; 42 (1934), 222-223; 43 (1935), 221-222; 44 (1936), 222-223; 45 (1937), 223-225.

Pierce, Anne E. "Studies in Teacher Training." Yearbook of the Music Educators National Conference, 1939-1940. Washington, D.C.: Music Educ. Natl. Conf., 1940, 89-92.

Pierce, Anne E. and E. Liebling. Class Lessons in Singing. New York: Silver Burdett Co., 1937.

Pitts, Carol M. Pitts Voice Class Method for Class and Studio. Chicago: Neil A. Kjos Music Co., 1936.

Pitts, Lilla Belle. Guide and Teaching Suggestions to our Singing World. Boston: Ginn and Co., 1952-55.

Pitts, Lilla Belle. The Music Curriculum in a Changing World. New York: Silver Burdett Co., 1944.

Pitts, Lilla Belle. Music Integration in the Junior High School. Boston: C. C. Birchard and Co., 1935.

Poznanski, Mischa. "Violin Harmonics and their Usage in Performance." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 62-4913; D.A. Vol. 23, p. 1734).

Pratt, Carroll C. Music as the Language of Emotion. Washington, D.C.: Govt. Printing Office, 1952.

Prescott, Gerald R., and Lawrence W. Chidester. Getting Results with School Bands. New York: Carl Fischer, Inc., 1938.

Pressey, Sidney L. (Ed.). Casebook of Research in Educational Psychology. New York: Harper and Bros., 1937.

Price, Gordon W. "Program Changes in Public Junior High Schools of Missouri 1914-1952." Unpublished Doctoral Dissertation, University of Missouri, 1953, (Ed.D.). (Univ. Micro. No. A53-1938; D.A. Vol. 13, p. 1119).

Primrose, William. Technique is Memory: A Method for Violin and Viola Players Based on Finger Patterns. New York: Oxford Univ. Press, 1960.

Proceedings of the Music Teachers National Association. Series 24-44, (1930-1953). Oberlin, Ohio: Mus. Teach. Natl. Ass., 1930-1938. Pittsburgh, Pa: Mus. Teach. Natl. Ass., 1939-1953.

Psychological Abstracts. Vols. 1-37 (1927-1963). Lancaster, Pa.: Amer. Psychol. Ass.

Psychological Bulletin. Vols. 27-59 (1930-1962). Washington, D.C.: Amer. Psychol Ass., Inc.

Psychological Monographs: General and Applied. Vols. 40-76 (1930-1962). Washington, D.C.: The Amer. Psychol. Ass., Inc.

Quinn, P. Jack. Experiments and Research on Production of Tonal Memory Records. Boston: Human Engineering Lab. Inc., 1940.

Rafferty, Sadie, and J. J. Weigand. "The Function of Music in the Secondary-School Curriculum." Bulletin of the National Association of Secondary-School Principals, 36, No. 189, Nov. 1952, 1-57.

Rainbow, Edward L. "A Pilot Study to Investigate Constructs of Musical Aptitude." Unpublished Doctoral Dissertation, State University of Iowa, 1963, (Ph.D.). (Univ. Micro. No. 63-4755; D.A. Vol. 24, p. 770).

Rayleigh, Lord John William Strutt. The Theory of Sound: With a Historical Introduction by Robert Bruce Lindsay. (2nd ed.) New York: Dover Pub., 1945.

Rea, Ralph C. "An Experimental Program for Improving the Sight-Reading Ability of Cornet and Clarinet Players." Unpublished Doctoral Dissertation, University of Iowa, 1954, (Ph.D.). (Univ. Micro. No. A54-1444; D.A. Vol. 14, 984).

Read, Oliver. The Recording and Reproduction of Sound. Indianapolis, Inc.: Howard W. Sams and Co., 1949.

Redfield, John. Music, A Science and An Art. (reprint ed.). New York: Tudor Pub. Co., 1935.

Rees, Helen E. A Psychology of Artistic Creation as Evidenced in Autobiographical Statements of Artists. New York: Teachers Coll., Columbia University, Bureau of Pub., 1942.

Reeves, William N., (Compiler). "Recently Completed Studies in Music and Music Education." In MENC Panel Program on Research and the Musical Art, William N. Reeves, Chairman, Atlantic City, March 18, 1960.

Reid, Cornelius L. Bel Canto: Principles and Practices. New York: Coleman-Ross Co., Inc., 1950.

Reid, Seerley, and Daniel Day. "Radio and Records in Education." Rev. of Educ. Res. 12 (June, 1942), 305-322.

Remsen, Lester E. "A Study of the Natural Trumpet and Its Modern Counter Part." Unpublished Doctoral Dissertation, University of Southern California, 1960, (D.M.A.). (Univ. Micro. No. 60-6216; D.A. Vol. 21, p. 1587).

Research Relating to Children. Washington, D.C.: U.S. Govt. Printing Office, 1948-1963.

Revesz, Geza. Introduction to the Psychology of Music. Norman, Okla.: Univ. of Oklahoma Press, 1954.

Review of Educational Research. (1931-1963). Washington, D.C.: Nat. Educ. Ass.

Righter, Charles B. Success in Teaching School Orchestras and Bands. Minneapolis, Minn.: Paul A. Schmitt Music Co., 1945.

Rinehart, Charles Bennett, Jr. "Incidence and Causes of Withdrawal from Public School Music Teaching." Unpublished Doctoral Dissertation, The Florida State University, 1963, (Ph.D.). (Univ. Micro. No. 63-4390; D.A. Vol. 24, pp. 323-324).

Roberts, Helen V. S. Music for Infants: A Handbook for Teachers of Five to Seven-Year Old Children. New York: Boosey and Hawkes, Inc., 1954.

Roma, Lisa. The Science and Art of Singing. New York: G. Schirmer, Inc., c1956.

Rokeach, Milton. The Open and Closed Mind. New York: Basic Books, 1960.

Rosenberg, Fred. The Violin: The Technique of Relaxation and Power. Cleveland, O.: Powell Pub. Co., c1961.

Rosewall, Richard B. Handbook of Singing. Evanston, Ill.: Summy-Birchard Co., 1961.

Ross, Edgar C., Jr. "An Experimental Study of the Effect of Analytical Guidance in Music Memorization." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-4046; D.A. Vol. 22, p. 2821).

Ross, William E. "An Objective Study of Breathing for Singing." Unpublished Doctoral Dissertation, Indiana University, 1955, (Ed.D.). (Univ. Micro. No. 55-284; D.A. Vol. 15, p. 1628).

Ross, William E. Secrets of Singing. Bloomington, Ind.: Indiana Univ. Press, 1959.

Rothwell, Evelyn. Oboe Technique. London: Oxford Univ. Press, 1954.

Rowe, Robert A. "A Study of Factors Affecting the Music Programs of Junior and Senior High Schools in Fairfield, Connecticut." Unpublished Doctoral Dissertation, University of Connecticut, 1960, (Ph.D.). (Univ. Micro. No. 60-5250; D.A. Vol. 21, p. 2564).

Rowland, Sam C. Percussion Technique. New York: O. Pagani and Bros., 1941.

Salatino, Anthony J. "Certain Physical Problems Involved in Playing the Double Bass." Unpublication Doctoral Dissertation, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 63-3767; D.A. Vol. 23, p. 4380).

Sarson, May. Music in the School. New York: H. W. Gray Co., c1934.

Savage, Edith Jones. "The Development of Instruction in Music Reading in Public Schools of the United States." Unpublished Doctoral Dissertation, University of Colorado, 1961, (Ed.D.). (Univ. Micro. No. 61-842; D.A. Vol. 21, p. 3025).

Savige, Homer M. "The Relation of Music Supervisory Services to Certain Phases of Musical Accomplishment in Selected Florida County School Systems." Unpublished Doctoral Dissertation, Florida State University, 1956, (Ph.D.). (Univ. Micro. No. 56-3464; D.A. Vol. 16, p. 2179).

Sawhill, Clarence, and Bertram McGarrity. Playing and Teaching Woodwind Instruments. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962.

Scanlin, Janet B. "Changes in Music Preferences Related to Planned Listening Experiences in a Secondary School General Music Class." Unpublished Master's Thesis, The Ohio State University, 1962, (M.A.).

Schmidt, Aaron. "Certain Integrants of Music Education Related to Participation in the Secondary School Music Program." Unpublished Doctoral Dissertation, University of Nebraska Teachers College, 1961, (Ed.D.). (Univ. Micro. No. 61-1472; D.A. Vol. 21, p. 3810).

Schoen, Max. "Bibliography of Experimental Studies on the Psychology of Music." In Theodore M. Finney (Ed.), Volume of Proceedings of the Music Teachers National Association, Thirty-fifth Series. Pittsburgh, Pa.: The Association, 1941, 498-527.

Schoen, Max. "Bibliography of Experimental Studies on the Psychology of Music." In Theodore M. Finney (Ed.), Volume of Proceedings of the Music Teachers National Association, Thirty-Sixth Series. Pittsburgh, Pa.: The Association, 1942, 421-431.

Schoen, Max. "Bibliography of Experimental Studies in the Psychology of Music." In Theodore M. Finney (Ed.), Volume of Proceedings of the Music Teachers National Association, Thirty-Seventh Series. Pittsburgh, Pa.: The Association, 1943, 184-

Schoen, Max. The Psychology of Music. New York: Ronald Press Co., 1940.

Schoen, Max. "Report of the Committee on Experimental Psychology of Music." In Karl Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association, Thirty-First Series. Oberlin, O.: The Association, 1937, 362-375.

Schoen, Max. "Report of the Committee on Music Tests and Measurements." In Karl Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association, Twenty-Ninth Series. Oberlin, O.: The Association, 1935, 319-25.

Schoen, Max. "Report of the Committee on Music Tests and Measurements." In Karl Gehrkens (Ed.), Volume of Proceedings of the Music Teachers National Association, Thirtieth Series. Oberlin, O.: The Association, 1935, 320-50.

The School Review. Vols. 38-69 (1930-1961). Chicago: Univ. of Chicago Press.

Schuller, Gunther. Horn Technique. New York: Oxford Univ. Press, 1962.

Scott, David W. "A Study of the Effect of Changes in Vocal Intensity Upon the Harmonic Structure of Selected Singing Tones Produced by Female Singers." Unpublished Doctoral Dissertation, Indiana University, 1960, (Mic. 60-5325). (Univ. Micro. No. 60-5325).

Sears, William W. "A Study of Some Effects of Music Upon Muscle Tension as Evidenced by Electromyographic Recordings." Unpublished Doctoral Dissertation, University of Kansas, 1960, (Ph.D.).

Seashore, Carl E. Psychology of Music. New York: McGraw-Hill Book Co., 1938.

Segel, David. "Measurement of Aptitudes in Special Fields: Musical Ability." Rev. of Educ. Res., 11 (1941), 44-45.

Seligman, E. R. A. (Ed.). Encyclopedia of the Social Sciences. New York: The MacMillan Co., 1930-35.

Sells, S. B. "Measurement and Prediction of Special Abilities." Rev. of Educ. Res., 14 (1944), 41-42.

Shambaugh, Robert F. "A Comparison of the Competencies Necessary to Teach Elementary General Music Education and the Measured Competencies of Elementary Classroom Teachers." Unpublished Doctoral Dissertation, University of Colorado, 1961, (Ed.D.). (Univ. Micro. No. 61-843; D.A. Vol. 21, p. 3116).

Shaw, Harold W., (Ed.). Musical Education, A Symposium. London: Hinrichsen Editions, Ltd., 1946.

Shaw, William W. Educational Vocal Technique in Song and Speech. Philadelphia: Theodore Presser Co., 1936.

Shepard, John W. "Principles of Method in Group String Instrument Instruction." Unpublished Doctoral Dissertation, University of Illinois, 1954, (Ed.D.). (Univ. Micro. No. A55-130; D.A. Vol. 15, p. 92).

Silber, John J. "Aural Analytic Ability in Harmonic Dictation in Musical Media." Unpublished Doctoral Dissertation, Indiana University, 1955, (Ph.D.). (Univ. Micro. No. 53-1692; D.A. Vol. 15, p. 2541).

Silverman, Marvin L. "Ensemble Improvisation as a Creative Technique in the Secondary Instrumental Music Program." Unpublished Doctoral Dissertation, Stanford University, 1962, (Ed.D.). (Univ. Micro. No. 62-4037; D.A. Vol. 23, p. 1562).

Simons, Gene M. "Comparisons of Incipient Music Responses Among Very Young Twins and Singletons." Unpublished Doctoral Dissertation, Florida State University, 1962, (Ph.D.). (Univ. Micro. No. 62-4633; D.A. Vol. 23, p. 1734).

Singleton, Ira C. Music in Secondary Schools. Boston: Allyn and Bacon, Inc., 1963.

Sloan, Muriel R. "A Comparison of Group Responses to Auditory, Visual and Kinesthetic Rhythms." Unpublished Doctoral Dissertation, University of Wisconsin, 1958, (Ph.D.). (Univ. Micro. No. 58-2576; D.A. Vol. 19, p. 269).

Smallman, John, and Wilcox, E. H. The Art of A Cappella Singing. New York: Oliver Ditson Co., 1933.

Smith, James A. "Creative Teaching in Elementary Schools: Its Basis in Research, with illustrations of Practice in Selected Areas." Unpublished Doctoral Dissertation, Syracuse University, 1955, (Ed.D.). (Univ. Micro. No. 56-1739; D.A. Vol. 16, p. 1107).

Smith, Robert B. "A Study of the Effect of Large-Group Vocal Training on the Singing Ability of Nursery School Children." Unpublished Doctoral Dissertation, University of Illinois, 1961, (Ed.D.). (Univ. Micro. No. 61-1667; D.A. Vol. 21, p. 3811).

Snyder, Alice M. "The Development, Construction and Standardization of a Test of Music Achievement." Unpublished Doctoral Dissertation, University of Oregon, 1958, (Ed.D.). (Univ. Micro. No. 58-2344; D.A. Vol. 19, p. 738).

Snyder, Keith D. School Music Administration and Supervision. Boston: Allyn and Bacon, Inc., 1959.

Sociological Abstracts. Vols. 1-11 (1952-1963). New York: Sociological Abstracts, Inc.

South Euclid - Lyndhurst City Schools. Music for Every Child and Every Child for Music. South Euclid, O.: South Euclid - Lyndhurst City Schools, 1962.

Southern Folklore Quarterly. Vols. 1-26 (1937-1962). Gainesville, Fl.: Univ. of Florida Press.

Speech Monographs. Vols. 1-29 (1954-1962) Bloomington, Ind.: Speech Ass. of Amer., Ind. Univ.

Sprenkle, Robert. The Art of Oboe Playing. Evanston, Ill: Summy-Birchard Pub. Co., c1961.

Spencer, William G. The Art of Bassoon Playing. Evanston, Ill.: Summy-Birchard Pub. Co., 1958. 77 pp.

Squire, Alan P. "An Annotated Bibliography of Written Material Pertinent to the Performance of Woodwind Chamber Music." Unpublished Doctoral Dissertation, University of Illinois, 1960, (Ed.D.). (Univ. Micro. No. 60-3999; D.A. Vol. 21, p. 1587).

Stanley, Douglas. Your Voice: Applied Science of Vocal Art. New York, Pitman Pub. Corp., 1945.

Stanley, Douglas. Your Voice: Applied Science of Vocal Art. (3rd ed.) New York: Pitman Pub. Corp., 1957.

Stanley, Douglas and S. Watkins. The Science of Voice. (2nd ed.). New York: Carl Fischer, Inc., 1932.

Stanton, Hazel M. "Measurement of Musical Talent: The Eastman Experiment." University of Iowa Studies: Studies in the Psychology of Music. Volume II, edited by Carl E. Seashore. Iowa City: University of Iowa, 1935, 141 p.

Stanton, Hazel M. "Research in Music: Looking Forward Thirty Years." Iowa University, Trends in Graduate Work. p. 136-138. Univ. of Iowa Studies, Series on Aims and Progress of Research, 38 (1931), 136-138.

Steg, Olaf W. "Student Teaching for Music Majors." Unpublished Doctoral Dissertation, Northwestern University, 1948, (Ph.D.).

Stein, Gertrude E. "A Study of the Relation of Music Instruction During Secondary School Years to Adult Musical Status as Reflected in the Activities, Interests and Attitudes of Recent High School Graduates." Unpublished Doctoral Dissertation, University of Michigan, 1948, (Ph.D.). (Univ. Micro. No. A48-179; D.A. Vol. 8, pp. 91-92).

Stein, Keith. The Art of Clarinet Playing. Evanston, Ill.: Summy-Birchard Pub. Co., 1958.

Stein, Morris Isaac, and Shirley J. Heinze. Creativity and the Individual: Summaries of Selected Literature in Psychology and Psychiatry. Glencoe, Ill.: Free Press, 1960.

Stetson, Raymond H. Bases of Phonology. Oberlin, O.: Oberlin Coll,, 1954.

Stevens, D. "Recent Research." Musical Times, 102 (March, 1961), 152-154.

Stewart, John W. "Influence of Public School Music Education as Revealed by a Comparison of Forty Selected High School Music and Non-Music Students." Unpublished Doctoral Dissertation, Florida State University, 1961, (Ed.D.). (Univ. Micro. No. 61-5657; D.A. Vol. 22, p. 2822).

Stewart, Sterling E. "Administrative Problems, Policies and Practices in Public School Stage and Auditorium Construction, Maintenance and Use." Unpublished Doctoral Dissertation, University of Nebraska, 1959, (Ed.D.).

Stinson, Ethelyn L. How to Teach Children Music. New York: Harper and Bros., 1941.

Stocking, Glen O. "A Case Study of Five Selected Colorado Public School Instrumental Music Supervisors: Their Philosophies of Supervision, Their Methods and Their Techniques of Evaluating Student Teachers, (Research Study No. 1)" Unpublished Doctoral Dissertation, Colorado State College, 1961, (Ed.D.). (Univ. Micro. No. 62-1583; D.A. Vol. 22, p. 4230).

Storr, M. Music for Children. Boston: E. C. Schirmer Music Co., (n.d.).

Stroessler, John H. "Music Teaching Competencies of Stanford Elementary Credential Candidates." Unpublished Doctoral Dissertation, Stanford University, 1949, (Ed.D.).

Sur, William K. (Ed.). Piano Instruction in the Schools. Chicago: Music Educ. Natl. Conf., 1949.

Sur, William R., and Charles F. Schuller. Music Education for Teen-Agers. New York: Harper and Bros., 1958.

Sweeney, Leslie. Teaching Techniques for the Brasses. Rockville Centre, N.Y.: Belwin Inc., 1953.

Taubman, Hyman H. How To Bring Up Your Child To Enjoy Music. Garden City, N.Y.: Hanover House, 1958.

Taylor, Bernard U. Group Voice. New York: G. Schirmer, Inc., 1936.

Taylor, Eric. A Method of Aural Training. London: Oxford Univ. Pres, 1955. (Published in 3 parts).

Teal, Larry. The Art of Saxophone Playing. Evanston, Ill.: Summy-Birchard Pub. Co., 1963.

Thomas, Helen Waller. "A Study of the Musical Interests and Attitudes of 804 Fifth and Sixth Grade Pupils in Grand Prairie, Texas." Unpublished Master's Thesis, University of Texas, 1954, (M.Ed.).

Thompson, Carl O., and Harriet Nordholm. Keys To Teaching Elementary School Music. Minneapolis, Minn.: Paul A. Schmitt Music Co., c1949.

Thompson, Randall. College Music. New York: The MacMillan Co., 1935.

Thornton, James. Woodwind Handbook. San Antonio: Southern Music Co., 1963.

Thurston, Frederick. Clarinet Technique. London: Oxford Univ. Press, 1956.

Timmerman, Maurine. Let's Teach Music in the Elementary School. Evanston, Ill.: Summy-Birchard Pub. Co., 1960.

Tipton, Eleanor L. "A Listening Progress of Instrumental Music for the Elementary Schools." Unpublished Doctoral Dissertation, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 63-2295; D.A. Vol. 24, p. 772).

Tkach, Peter D. Vocal Technique. Chicago: Neil A. Kjos Music Co., c1948.

Tkach, Peter D. Vocal Artistry. Chicago: Neil A. Kjos Music Co., c1950.

Troaper, Orville W. "The Principles and Practices of Producing Vibrato in Brass Instrument Performance." Unpublished Doctoral Dissertation, Teachers College, Columbia University, 1962, (Ed.D.). (Univ. Micro. No. 62-4926; D.A. Vol. 23, p. 2452).

Truitt, Austin H. "An Analysis of Music Education in Three New York State Cities." Unpublished Doctoral Dissertation, Eastman School of Music, University of Rochester, 1953, (Ph.D.).

Trusler, Milton S. "The Musical Education of Elementary Classroom Teachers: A Survey and Appraisal of the Musical Preparation of Elementary Teachers in Arkansas." Unpublished Doctoral Dissertation, Indiana University, 1957, (Ph.D.). (Univ. Micro. No. 58-363; D.A. Vol. 18, p. 250).

Trzcinski, Louis C. Planning the String Program in Schools. Lincoln, Neb.: Univ. of Neb. Press, 1956.

Trzcinski, Louis. Planning the School String Program. New York: Mills Music Co., Inc., 1963.

Turrentine, Edgar M. "Predicting Success in Practice Teaching in Music." Unpublished Doctoral Dissertation, State University of Iowa, 1962, (Ph.D.). (Univ. Micro. No. 63-980; D.A. Vol. 23, 2814).

Uhl, Willis L. "Contributions of Research to Special Methods: Music and Art." Thirty-Seventh Yearbook, Natl. Soc. for the Study of Educ., Part II: The Scientific Movement in Educ. Bloomington, Ill.: Pub. Sch. Publishing Co., 1938, 171-78.

Unger, Max. "From Beethoven's Workshop." Musical Quart., 24 (1938), p. 323-40.

United States Bureau of American Ethnology. List of Publications of the Bureau of American Ethnology, with Index to Authors and Titles. Washington: U.S. Govt. Printing Office, 1962.

United States Department of Health, Education, and Welfare. Cooperative Research Projects: A Seven-Year Summary, July 1, 1956 - June 30, 1963. Washington, D.C.: U.S. Govt. Printing Office, 1963.

United States Office of Education. Bibliography of Research Studies in Education, 1926-1927 - 1939-1940. Washington D.C.: U.S. Govt. Printing Office.

United States Office of Education. 1937-1959 Publications. Washington D.C.: U.S. Govt. Printing Office, 1960.

United States Office of Education. Publications of the Office of Education, 1962. Washington D.C.: U.S. Govt. Printing Office, 1962.

United States Office of Education. Research Abstracts and Analytical Review, Installments 1-4. (1958-1961) Washington D.C.: Dept. of Health, Educ., and Welfare, Office of Educ.

United States Office of Education. Doctors' Theses in Education: A List of 797 Theses Deposited with the Office of Education and Available for Loan. Washington D.C.: U. S. Govt. Printing Office, 1955.

United States Office of Education. List of Educational Research Studies of State Department of Education and State Education Association. Washington D.C.: U.S. Govt. Printing Office, 1931.

United States Office of Education. Research Projects of the Cooperative Research Program: A 5 Year Summary, July 1, 1956 - Sept. 30, 1961. Washington D.C.: U.S. Govt. Printing Office, 1962.

University of Illinois: Division of University Extension. Bulletins 1-6, 9, 11-13, 16, 18, 20, 24-36, 38 (On Materials and Instrumental Methods and Techniques. Urbana, Ill.: Univ. Ill., Division of Univ. Extension, n.d.

University of Illinois Bulletins, Vols. 48-63 (1930-1947). Urbana, Ill.: Univ. of Ill.

University of Iowa Studies: Studies in the Psychology of Music. Vol. I-IV, (1932-1936). Iowa City: Univ. of Iowa.

Utgaard, Merton B. "The Construction and the Validation of a Test Designed to Measure the Degree of Preparedness for Entrance into the Senior High School Select Band." Unpublished Doctoral Dissertation, Colorado State College, 1950, (Ed.D.).

Van Vactor, David, and Katherine D. Moore. Every Child May Hear. Knoxville, Tenn.: Univ. of Tenn. Press, 1960.

Vening, George H., and Edward Polder. A Bibliography of Creativity. Columbus, O.: Ohio Ohio State Univ., 1954.

Vennard, William. Singing: The Mechanism and the Technique. Ann Arbor, Mich.: Edward Bros., Inc., 1949-50.

Vernazza, Marcelle. Making and Playing Classroom Instruments. San Francisco: Fearon Pub., 1959.

Vernon, Leroy N. "Synchronization of Chords in Artistic Piano Music." University of Iowa, Studies in the Psychology of Music. Iowa City, Iowa: University Press, 4 (1936), 306-345.

Virginia State Board of Education. Music in Grades One through Twelve. Richmond, Va.: Commonwealth of Virginia, Division of Purchase and Printing, 1954.

Vroman, Clyde. "A Basis for Selecting the Content of the Curriculum for the Training of Teachers of Music in the University of Michigan." Unpublished Doctoral Dissertation, University of Michigan, 1942, (Ph.D.).

Wager, Willis, and Earl J. McGrath. Liberal Education and Music. New York: Teachers Coll., Columbia Univ., Bureau of Pub., 1962.

Wagner, Arnold. "Research in the Field of Voice Training." Yearbook of the Music Educators National Conference, 1940. Washington, D.C.: Music Educ. Nat. Conf., 1940, 343-47.

Wagner, Howard O. "A Study of the General Music Program of Selected Secondary Schools Located in Seven Central Ohio Counties." Unpublished Master's Thesis, Ohio State University, 1960, (M.A.).

Ward, Sylvan D. The Instrumental Director's Handbook. Chicago: Rubank, Inc., 1940.

Warmack, Donald L. "Eighteenth Century String Chamber Music, Selected for Use in the Training of School Instrumentalists." Unpublished Doctoral Dissertation, University of Southern California, 1960, (D.M.A.). (Univ. Micro. No. 60-1316; D.A. Vol. 20, p. 4681).

Watson, Nelson. A Modern Method for the Double Bass. Rochester, N.Y.: Eastman School of Music, 1938.

Weast, Robert D. Brass Performance: An Analytical Text of the Physical Process, Problem and Techniques of Brass. New York: McGinnis & Marx, c1961.

Weersing, Frederick J., and Benjamin R. Haynes (compilers). Annotated Index of Theses and Dissertations in Education. Los Angeles: Univ. of S. Calif., L.A.: Alpha Epsilon Chapter of Phi Kelta Kappa, 1931.

Wehner, Walter L. "The Effect of Interior Shape and Size of Clarinet Mouthpieces on Intonation and Tone Quality." Unpublished Doctoral Dissertation, University of Kansas, 1961, (Ed.D.).

Weigand, J. J. "The Scientific Approach to Music Teaching." Mus. Educ. J., 33 (November-December, 1946), 32.

Weis, Ezra Herman Franklin. Training the Adolescent Voice. Minneapolis, Minn.: Burgess Pub. Co., 1938.

Weise, William M. "A Study and Evaluation of the Music Programs in the Seven Public High Schools of Newark, New Jersey." Unpublished Doctoral Dissertation, New York University, 1956, (Ed.D.). (Univ. Micro. No. 57-4631; D.A. Vol. 17, p. 2902).

Welch, Luch M. Song Teaching. London: J. Curwin and Sons, Ltd., n.d.

Werder, Richard H. (Ed.). Developing Teaching Skills in Music: Proceedings of the Workshop on Developing Teaching Skills in Music, Conducted at The Catholic University of America, June 12 to 23, 1959. Washington, D.C.: The Catholic Univ. of Amer. Press, 1960.

Werder, Richard H. (Ed.). Music Education in the Secondary School: The Proceedings of the Workshop on Music Education in the Secondary School. Conducted at the Catholic University of America, June 11 to June 22, 1954. Washington, D.C.: The Catholic Univ. of Amer. Press.

Werder, Richard H. (Ed.). Music Skills: The Proceedings of the Workshop on Music Skills Conducted at the Catholic University of America, June 14 to 25, 1957. Washington, D.C.: The Catholic Univ. of Amer. Press, 1958.

Werder, Richard H. (Ed.). Music Teaching Techniques: The Proceedings of the Workshop on Music Teaching Techniques. Conducted at the Catholic University of America, June 13 to 24, 1958. Washington, D.C.: The Catholic Univ. of Amer. Press, 1959.

Werder, Richard H. (Ed.). Procedures and Techniques of Music Teaching: The Proceedings of the Workshop on Procedures and Techniques of Music Teaching. Conducted at the Catholic University of America, June 16 to June 27, 1961. Washington, D.C.: The Catholic Univ. of Amer. Press, 1962.

West, Alvoretta. Signposts to Music. New York: Carl Fisher Inc., 1935.

Westerman, Kenneth N. The Emergent Voice. Ann Arbor, Mich.: Westerman, Box 62, 1947.

Westrup, J. A. "Musical Research." Hinrichsen, 6 (1949-50), 143-146.

Weyland, Rudolph H. A Guide To Effective Music Supervision. Dubuque, Ia.: W. C. Brown Co., c1960.

Whitcomb, Mervin W. "Analysis of Pupils' Likes and Dislikes of Music at the Junior High School Level." Unpublished Master's Thesis, Boston University, 1947, (Ed.M.).

White, Howard G. "Survey of Research Interests of New Mexico Music Educators." Eastern New Mexico University, 1962.

Whitley, Mary T. "Music." Rev. of Educ. Res., 4 (1934), 501-502.

Whitley, Mary T. "Psychology and Methods of High School and College: Music." Rev. of Educ. Res., 4 (1934), 501-02, 539-40.

Whitley, Mary T. "Psychology of the School Subjects: Music." Rev. of Educ. Res., 1 (1931), 395-97, 436-38.

Whitworth, James R. "A cinefluorographic Investigation of the Supralaryngeal Adjustments in the Male Voice Accompanying the Singing of Low Tones and High Tones." Unpublished Doctoral Dissertation, State University of Iowa, 1961, (Ph.D.). (Univ. Micro. No. 61-5622; D.A. Vol. 22, p. 2824).

Whybrew, William E. Measurement and Evaluation in Music. Dubuque, Ia.: W. C. Brown Co., 1962.

Wiebe, G. D. "Evaluation of Research Studies in the Psychology of Music." In Theodore M. Finney (Ed.) Volume of Proceedings of the Forty-Second Series. Music Teachers National Association. Pittsburgh, Pa.: The Association, 1948, 230-35.

Wiebe, Gerhart D. "Music." Rev. of Educ. Res., 11 (October, 1941), 408-15.

Wilcox, John. The Living Voice. New York: Carl Fischer, Inc., 1935.

Wiley, Charles A. "An Experimental Study of Tachistoscopic Techniques in Teaching Rhythmic Sight-Reading in Music." Unpublished Doctoral Dissertation, University of Colorado, 1962, (Ed.D.). (Univ. Micro. No. 63-2029; D.A. Vol. 23, p. 3925).

Willaman, Robert. The Clarinet and Clarinet Playing. Salt Point, N.Y.: Robert Willaman, 1949.

Wiley, George A. "The Visualization of Music on Television, with Emphasis on The Standard Hour." Unpublished Doctoral Dissertation, Stanford University, 1956, (Ph.D.). (Univ. Micro. No. 57-704; D.A. Vol. 17, p. 440).

Williams, Frances S. "American Dances for the American Secondary Schools." Unpublished Master's Thesis, Temple University, 1935, (M.A.).

Williams, H. M., C. H. Sievers, and M.S. Hattwick. "The Measurement of Musical Development." Univ. of Iowa Studies in Child Welfare, 7:1 (1932).

Williams, Thomas D. "A Study of the Effect of Music as a Distractor on Mental Test Performance of Certain Eleventh Grade Students." Unpublished Doctoral Dissertation, Temple University, 1961, (Ed.D.). (Univ. Micro. No. 61-2728).

Wilson, Harry R. Artistic Choral Singing. New York: G. Schirmer, Inc., 1959.

Wilson, Harry R. Music in the High School. New York, Silver-Burdett Co., 1941.

Wilson, M. Emett. How to Help Your Child with Music. New York: Henry Schuman, c1951.

Winchell, Constance M. Guide to Reference Works. (7th ed.) Chicago: Amer. Library Ass., 1951.

Winslow, Robert W., and John E. Greer. Playing and Teaching Brass Instruments. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1961.

Witty, P. A. "Thirty Years of Research upon Gifted Children." Understanding the Child, 17 (1948), 35-40.

Woeflin, Leslie E. "An Experimental Study on the Teaching of Clarinet Fingerings with Teaching Machines." Unpublished Doctoral Dissertation, Southern Illinois University, 1961, (Ph.D.). (Univ. Micro. No. 62-1572; D.A. Vol. 23, p. 650).

Wood, Carl P. Ear Tests in Harmony. New York: Amer. Book Co., c1936.

Woods, Elizabeth R. Music and Meaning. Cambridge, Mass.: Harvard Univ. Press, 1932.

Woodward, Clair D. "An Investigation of Music Education at the University of Colorado, 1963, (Ed.D.). (Univ. Micro. No. 63-4886; D.A. Vol. 23, p. 4618).

Woodwind Magazine, Vol. 1-7 (1948-1955). New York: 53 W. 47th St.

Woollatt, Lorne Hedley. The Cost-Quality Relationship on the Growing Edge. New York: Bureau of Pub., Columbia Univ., 1949.

Woolridge, Warren B. "The Nasal Resonance Factor in the Sustained Vowel Tone in the Singing Voice." Unpublished Doctoral Dissertation, Indiana University, 1954, (Ph.D.). (Univ. Micro. No. A54-3114; D.A. Vol. 14, p. 2089).

Worrel, John W. "An Evaluation of Teacher Preparation in Music Education at the University of Kentucky Through an Analysis of the Opinions of Graduates." Unpublished Doctoral Dissertation, University of Illinois, 1957, (Ed.D.).

Worthington, Richard A. "A Review of Doctoral Dissertations in Music Education." Unpublished Doctoral Dissertation, University of Illinois, 1956, (Ed.D.). (Univ. Micro. No. 57-856; D.A. Vol. 17, p. 537).

Wright, Frances. Elementary Music Education. Los Angeles: Lymanhouse, 1939.

Youcis, Harold J. "A Comparative Study of Curricula Standards for Training the School Instrumental Teacher." Unpublished Doctoral Dissertation, Indiana University, 1960, (Ed.D.). (Univ. Micro. No. 60-6073; D.A. Vol. 21, p. 2619).

Young, Gerard M. What Happens in Singing: A Short Manual of Vocal Mechanics and Technique. New York: Pittman, 1956.

Young, Morris N. Bibliography of Memory. New York: Book Division, Chilton Co., 1961.

Young, Percy M. A Handbook of Choral Technique. London: Dennis Dobson Ltd., 1953.

Zimmer, Albert A. "National Survey of the Music Education Program in Secondary Schools." unpublished Doctoral Dissertation, University of Pittsburgh, 1951, (Ph.D.).

APPENDIX F

List of Cooperating Institutions

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APPENDIX F

List of Cooperating Institutions

Arizona
- Arizona State College, Flagstaff
- Arizona State University, Tempe
- University of Arizona, Tucson

Arkansas
- University of Arkansas, Fayetteville

California
- Humbolt State College, Arcata
- University of California, Berkeley
- Chico State College, Chico
- Claremont Graduate School, Claremont
- Fresno State College, Fresno
- Occidental College, Los Angeles
- University of California, Los Angeles
- College of Holy Names, Oakland
- University of Redlands, Redlands
- San Jose State College, San Jose
- Stanford University, Stanford

Colorado
- University of Colorado, Boulder
- Colorado College, Colorado Springs
- University of Denver, Denver
- Colorado State University, Fort Collins
- Colorado State College, Greeley
- Western State College, Gunnison

Connecticut
- Danbury State College, Danbury
- Yale University, New Haven
- University of Connecticut, Storrs
- Hartt College of Music, West Hartford

Florida
- University of Florida, Gainesville
- Florida State University School of Music, Tallahassee

Georgia
- The University of Georgia, Athens

Hawaii
- University of Hawaii, Honolulu

Illinois
- Eastern Illinois University, Charleston
- Roosevelt University, Chicago
- Northern Illinois University, DeKalb
- Northwestern University, Evanston
- Illinois State University, Normal
- Bradley University, Peoria
- University of Illinois, Urbana

Indiana
Indiana University, Bloomington
University of Notre Dame, Notre Dame
Indiana State College, Terre Haute

Iowa
State University of Iowa, Iowa City
State College of Iowa, Cedar Falls

Kansas
University of Kansas, Lawrence
Kansas State College of Pittsburg, Pittsburg
University of Wichita, Wichita

Kentucky
University of Louisville, Louisville

Louisiana
Louisiana State University, Baton Rouge
Northwestern State College, Natchitoches

Maryland
Peabody Conservatory of Music, Baltimore
University of Maryland, College Park

Massachusetts
Boston Conservatory of Music, Boston
Boston University, Boston
New England Conservatory of Music, Boston
Harvard University, Cambridge

Michigan
The University of Michigan, Ann Arbor
Ferris State College, Big Rapids
Wayne State University, Detroit
Michigan State University, East Lansing
Western Michigan University, Kalamazoo

Minnesota
Mankato State College, Mankato
St. Cloud State College, St. Cloud
College of St. Thomas, St. Paul
Winona State College, Winona

Missouri
University of Missouri, Columbia
University of Missouri, Kansas City
Northeast Missouri State Teachers College, Kirksville
Washington University, St. Louis
Central Missouri State College, Warrensburg

Montana
Montana State University, Missoula

Nebraska
Kearney State College, Kearney

New Jersey
Douglass College of Rutgers, Rutgers

New Mexico

Eastern New Mexico University, Portales
New Mexico State University, University Park

New York

State University of New York, College at Buffalo, Buffalo
State University of New York, College at Fredonia, Fredonia
New York University, New York
Teachers College, Columbia University, New York
State University of New York, College at Potsdam, Potsdam
Nazareth College of Rochester, Rochester
Eastman School of Music, Rochester
Syracuse University, Syracuse
Rensselaer Polytechnic Institute, Troy

North Carolina

Appalachian State Teachers College, Boone
University of North Carolina, Chapel Hill
North Carolina College at Durham, Durham
University of North Carolina Woman's College, Greensboro

Nevada

University of Nevada, Reno

North Dakota

University of North Dakota, Grand Forks

Ohio

The University of Akron, Akron
The Ohio State University, Columbus
Kent State University, Kent

Oklahoma

Oklahoma University, Norman

Oregon

Oregon State University, Corvallis
Lewis and Clark College, Portland

Pennsylvania

Indiana State College, Indiana
Duquesne University, Pittsburgh
The Pennsylvania State University, University Park
West Chester State College, West Chester

Rhode Island

University of Rhode Island, Kingston
Brown University, Providence

South Carolina

Converse College School of Music, Spartanburg

South Dakota

Black Hills Teachers College, Spearfish
University of South Dakota, Vermillion

Tennessee

The University of Tennessee, Knoxville
George Peabody College for Teachers, Nashville
Tennessee Agriculture and Industrial State University, Nashville

Texas

Hardin-Simmons University, Abilene
The University of Texas, Austin
West Texas State University, Canyon
East Texas State College, Commerce
Texas Woman's University, Denton
Texas Christian University, Fort Worth
Texas Southern University, Houston
University of Houston, Houston
Sam Houston State Teachers College, Huntsville
Texas College of Arts and Industries, Kingsville
Trinity University, San Antonio
Incarnate Word College, San Antonio
Stephen F. Austin State College, Nicogdoches
Southwest Texas College, San Marcos
Baylor University, Waco
Midwestern University, Wichita Falls

Utah

Brigham Young University, Provo
University of Utah, Salt Lake City

Vermont

University of Vermont, Burlington

Virginia

University of Virginia, Charlottesville
Madison College, Harrisonburg
Richmond Professional Institute, Richmond

Washington

Western Washington State College, Bellingham
Eastern Washington State College, Cheney
Central Washington State College, Ellensburg
Washington State University, Pullman
Seattle Pacific College, Seattle
University of Washington, Seattle

West Virginia

West Virginia University, Morgantown

Wisconsin

University of Wisconsin, Madison

Wyoming

University of Wyoming, Laramie

APPENDIX G

Materials Used in the Project

Exhibit 1. Memorandum

Exhibit 2. Letter: Institutions Not Listed in Larson

Exhibit 3. Form: Published Faculty Research

Exhibit 4. Form: Unpublished Faculty Research

Exhibit 5. Form: Graduate Student Research

Exhibit 6. Letter: Institutions Listed in Larson (1932-1948)

Exhibit 7. Letter: Institutions Listed in Larson (1949-1956)

Exhibit 8. Letter: Authors

Exhibit 9. Abstract Form

Exhibit 10. Abstractor's Guidebook

Exhibit 11. ERIC Resume Form

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Exhibit 1

Attention: Office of the President

From: Music Education Research Office
The Ohio State University
Erwin H. Schneider and Henry L. Cady, Co-Directors
USOE Research Project No. E-016

Subject: As Part of a federally sponsored research project in music education, it is necessary for us to compile a complete and accurate list of all institutions in higher education offering graduate programs in music education.

Would you please complete the form given below and return it to us at your earliest convenience in the enclosed self-addressed, stamped envelope?

Your assistance is important to the accuracy of this project and will be appreciated very much.

* *

Name of Institution: _____

_____

Address: _____

_____

Graduate programs offered in music education:

None ___, Master ___, Doctor ___, Other _____

Name of Head of Music Education: _____
or
Name of Head of Music Department: _____

Exhibit 2

A grant from the Cooperative Research Bureau of the United States Office of Education is making possible the first complete compilation and synthesis of all research studies relating to music education through December 31, 1962. The project terminates September 30, 1965.

At the present time, researchers are compiling a list of studies relating to music education from all available sources -- music, education, sociology, etc.. No source is complete and some are inaccurate. In order to make this project as accurate and valid as possible, your assistance is needed.

Would you please supply us with a list of research studies completed at your institution as follows:

a) Studies completed during 1930-1962 (theses and dissertations).

b) Studies completed by your staff (published and unpublished).

c) Studies relating to music education which have been completed in other departments on your campus (psychology, sociology, etc.).

Three forms and a self-addressed envelope are enclosed for your convenience. It is hoped that these forms will be returned to us in thirty to sixty days.

We realize that this request involves no small task but there seems to be no other way of obtaining a reliable list. Please do what you can to help us expedite the gathering of this information.

Sincerely yours,

Erwin H. Schneider
Co-Director

Henry L. Cady
Co-Director

Faculty Research -- Project No. E-016
Research Relating to Music Education
Published Faculty Research

Institution Reporting: _____

Please use the following form for your report. Additional sheets should also use this form.

Author	Title	Publication Source	Volume and/or No.	Date	Pages
Example: Riker, B.L.	The Ability to Judge Pitch	Journal of Experimental Psychology	III:4	1946	331-336

Exhibit 3

Faculty Research -- Project No. E-016
Research Relating to Music Education
Unpublished Faculty Research

Institution Reporting: _____

Please use the following form for your report. Additional sheets should also use this form.

Author	Title	Completion Date	Academic Department	Copy Obtainable From:
Example: Bilnap, James	Social Factors in Music Teacher Role Evaluation	1960	Sociology	James Bilnap Dept. of Sociology

Student Research -- Project No. E-016
Research Relating to Music Education
Graduate Student Research

Institution Reporting: _____

Please use the following form for your report. Additional sheets should also use this form.

Author	Title	Completion Date	Degree	If published, give source:
Example: Benner, Charles H.	The Relationship of Pre-Service Measures to Ratings of Music Teacher Success	1963	Ph.D.	none

Exhibit 6

A grant from the Cooperative Research Bureau of the United States Office of Education is making possible the first complete compilation and synthesis of all research studies relating to music education through December 31, 1962. The project terminates September 30, 1965.

At the present time, researchers are compiling a list of studies relating to music education from all available sources -- education, music, sociology, etc.. No source is complete and some are inaccurate. In order to make this project as accurate and valid as possible, your assistance is needed.

Would you please supply us with a list of research studies completed at your institution as follows:

a) Studies completed during 1932-1948 which are not listed in Larson's "Bibliography of Research Studies in Music Education, 1932-1948."

b) Studies completed during 1949-1962 (theses and dissertations).

c) Studies completed by your staff (published and unpublished).

d) Studies relating to music education which have been completed in other departments on your campus (psychology, sociology, etc.).

Three forms and a self-addressed envelope are enclosed for your convenience. It is hoped that these forms can be returned to us in thirty to sixty days.

We realize that this request involves no small task but there seems to be no other way of obtaining a reliable list. Please do what you can to help us expedite the gathering of this basic information,

Sincerely yours,

Erwin H. Schneider
Co-Director

Henry L. Cady
Co-Director

Exhibit 7

A grant from the Cooperative Research Bureau of the United States Office of Education is making possible the first complete compilation and synthesis of all research studies relating to music education through December 31, 1962. The project terminates September 30, 1965.

At the present time, researchers are compiling a list of studies relating to music education from all available sources -- music, education, sociology, etc.. No source is complete and some are inaccurate. In order to make this project as accurate and valid as possible, your assistance is needed.

Would you please supply us with a list of research studies completed at your institution as follows:

a) Studies completed during 1932-1956 which are not listed in Larson's "Bibliography of Research Studies in Music Education, 1932-1948" and the second volume for 1949-1956.

b) Studies completed during 1957-1962 (theses and dissertations).

c) Studies completed by your staff (published and unpublished).

d) Studies relating to music education which have been completed in other departments on your campus (psychology, sociology, etc.).

Three forms and a self-addressed envelope are enclosed for your convenience. It is hoped that these forms will be returned to us in thirty to sixty days.

We realize that this request involves no small task but there seems to be no other way of obtaining a reliable list. Please do what you can to help us expidite the gathering of this basic information,

Sincerely yours,

Erwin H. Schneider
Co-Director

Henry L. Cady
Co-Director

Exhibit 8

Dear Sir:

As you may know, we are in the process of abstracting and synthesizing information from research studies in music education. The primary supporting agency for this project is the United States Office of Education.

In answer to our inquiry, your institution sent to us a list of your unpublished research. We would appreciate receiving copies of those items which you consider to be research. Our report will not include polemics or articles which are not reports of research. Please do not include a copy of your thesis or dissertation. In the event it cannot be obtained from the holding library, we will make a specific request for it. Because we are now in the process of abstracting, a very early reply from you will be appreciated.

For your convenience, we are attaching the list of items which was reported to us.

Sincerely yours,

Henry L. Cady, Co-Director
Music Education Research Office
41 West 11th Avenue

HLC:mw

Exhibit 9

Music Education Research Project RF-1757
Resume (250-300 words)

Card Code: _____

Abstractor: _____

Date: _____

Relevant: Yes ___, No ___, ?__

Competent: Yes ___, No ___, ?__

I. Author, Title, Source:

II. Major Faculty Advisor: _____

III. Source of Data:

____a. Literature of Field
____b. Observations
____c. Interviews
____d. Questionnaires
____e. Tests
____f. Other _____

IV. Type of Research:

____a. Descriptive
____b. Experimental
____c. Statistical
____d. Philosophical
____e. Historical
____f. Other _____

V. Problem and/or Purpose:

VI. Procedures:

VII. Major Findings and/or Conclusions:

Music Education Research Project RF-1757

Card Code: _____
Abstractor: _____
Date: _____

RELEVANT: Yes ___, No ___, ? ____

ABSTRACT FORM

I. Complete Bibliographic Information (from source):

II. The Problem

Problem Statement (p. _____):

Purpose (p. _____):

Hypotheses or Questions (p. _____):

Card Code: _____

III. Methodology

Population (p. _____)

Size: _____

Type: _____

Other:

Sampling Technique (p. _____)

Materials (p. _____)

Procedures (p. _____)

Card Code: _____

Data Collection Techniques (pp. _____)

Data Analysis Techniques (pp. _____)

Limitations (pp. _____)

IV. Conclusions (pp. _____)

Card Code: _____

Limitations--Authors (pp. _____)

V. Additional Research Suggested by Author (pp. _____)

Card Code: _____

VI. Abstractor's Evaluation

Response			Item
Yes	No	?	
___	___	___	1. Is the problem properly defined and the scope of the study delimited so that no misunderstanding can develop regarding just what was studied? (pp. _____)
___	___	___	2. Were appropriate methods chosen to test the hypotheses or answer the questions raised? (pp. _____)
___	___	___	3. Are the methods adequately described--to the extent that another person could repeat the study? (pp. _____)
___	___	___	4. Was the sample sufficiently representative of the population to permit the investigator to generalize his findings? (pp. _____)
___	___	___	5. Were validating procedures employed for materials, techniques, raters, etc. used in the study? (pp. _____)
___	___	___	6. Was the analysis of data objectively stated and free from mere personal opinion and personal prejudices? (pp. _____)
___	___	___	7. Are the statistical techniques employed appropriate to the problem and design? (pp. _____)
___	___	___	8. Do the conclusions follow from the data gathered? (pp. _____)
___	___	___	9. Were the conclusions qualified to show the limits within which they apply? (pp. _____)
___	___	___	10. Does this study contain a unique feature, design, etc? If so, list:
___	___	___	11. Is this study acceptable as research?

Abstractor's General Critical Comments:

10

Exhibit 10

ABSTRACTOR'S GUIDEBOOK

A. General Information--Use of Abstract Form

1. Use only black or blue ink on the Abstract Form.

2. Place card code number, last name, and date in the spaces provided on the top right-hand corner of the first page of the Abstract Form. Place card code number on the top of all other pages.

3. Check study for relevance. Examine the Contents, Introductory Statements, and Problem or Hypotheses. If you can not make a judgement on relevance after this cursory examination, begin to abstract the study. As soon as you are able to make this judgement, place a check mark in the appropriate blank on the top right-hand corner of the Abstract Form. If you are doubtful of the relevance of a study, place a check mark in the blank following the question mark and deposit the Form with the document on the fourth shelf of the storage cabinet--labeled "Questionable Studies."

4. The Abstract Form has three basic sections:

   a. Information about the study (Items I-V). This section calls for sheer reporting of the information contained in the study.

   b. Evaluation of the Study (Item VI). Here the abstractor is asked to give an evaluation of the study. This evaluation is to provide cues for the project directors who will make the final evaluation.

   c. Summary of the Study--by the abstractor (last page). Here the abstractor is to summarize the study in brief form. This should be written so that only a minimum of editing is necessary before printing. The project directors will check the adequacy of the summary.

   For details concerning each of these sections see the next major heading--B. Specific Directions.

5. The Abstract Form is designed to (a) gather the most important information in a study, and (b) follow the general form for presenting information utilized in most studies. Not all Studies will follow this form of information presentation. You will find, with some studies, that you will need to skip around through many pages to obtain the necessary information.

6. Some items on the Form will not be applicable to all research Studies. Some items on the form, thus, will not be used. Attempt to use each item, but if information is not available, leave the item blank.

7. Add any additional relevant information (not indicated by the items listed) on the back of page 4 of the Abstract Form. Indicate this type of reporting by placing the word "over" on the bottom, front-side, of this page.

8. Use outline or abbreviated style in reporting the information requested. Whenever possible, quote information from source, but always place this material in quotation marks. Omit words that do not add to the meaning, but indicate such ommissions by three periods...(four periods if end of a sentence....). If paraphrasing, in the middle of a quotation, use brackets--[ ].

9. Guide for Locating Information.

   a. Problem, purpose, hypotheses or questions, usually stated in first sections or chapter(s).

   b. Materials, procedures, techniques, usually described in middle sections or chapters.

   c. Summary and Conclusions, usually stated in last section or chapter(s).

      The summary section of a study frequently will provide much of the information called for on the Abstract Form. If such is the case, the information presented in the summary may be used in reporting information on each of the items on the Abstract Form.

10. Placement of Abstract and Document. When an abstract is completed, place the Abstract Form and the document together on the shelf (fifth) in the storage cabinet designated for this use.

    Keep all documents and Abstract Forms in this cabinet. Not in store any other place. The cabinet must be kept locked when not in use.

    Shelves will be labeled as follows: TO DO -- new studies to be abstracted. Placed here by project directors. IN PROCESS -- storage for studies in process of being abstracted.

11. Blank Abstract Forms will be stored on top of Filing Case in the middle office.

12. All abstracts will be checked against the original documents by the project directors. The final evaluation and editing of the abstracts will be the sole responsibility of the project directors.

B. Specific Directions

1. Complete Bibliographic Information (I). Use the following form for reporting this information (adapted from the APA Publication Manual.):

   a) Book Citations

      Jefferds, C. V. The Psychology of Industrial Unrest. New York: McGraw-Hill, 1951.

      Book: New Edition

      Jefferds, C. V. The Psychology of Industrial Unrest. (2nd ed.) New York: McGraw-Hill, 1955.

      Edited Book

      Rodner, A. H. (Ed.), Theories of Psychopathology. Springfield, Ill.: Charles C. Thomas, 1945.

      Specific Chapter in Edited Book

      Stansill, Dora. "The Reinforcement of Anxiety." In A. H. Rodner (Ed.), Theories of Psychopathology. Springfield, Ill.: Charles C. Thomas, 1945, pp. 50-93.

   b. Journal Citations (without published abstract)

Journal Article, Pagination by Volume

Archer, P. W. "The Tactile Perception of Roughness." Amer. J. Psychol., 63 (1950), 365-373 or 63 (June, 1950), 365-373.

Journal Article, Pagination by Issue

Cardinal, M. H. "Anxiety Among Displaced Children." Bull. World Fed. Ment. Hlth., 2:4 (1950), 27-35 or 2:4 (June, 1950), 27-35 or 2 (June, 1950), 27-35.

c) Journal Citations (with published abstract)

See b above for comparison.

Archer, P. W. "The Tactile Perception of Roughness." Amer. J. Psychol., 63 (1950), 365-373. (P.A. Vol. 6, No. 4507) or (S.A. Vol. 6, No. 4507).

d) Monograph Citations

Monograph, with Volume Number, Issue Number and Serial (Whole) No.

Follette, Jane. "The Relation of Intelligence to Motor Skill." Psychol. Monogr., 62:14 (Whole No. 287), 1950.

Monograph Without Volume Number

Merwede, D. R. "Measurement of Teachers' Attitudes." Teach. Coll. Contr. Educ., No. 643, 1950.

e) Yearbook Citations

Mueller, John H. "Sociological Factors in Music Education." In Nelson B. Henry (Ed.), Basic Concepts in Music Education, Fifty-Seventh Yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press, 1958, pp. 150-170.

Henry, Nelson B. (Ed.). Basic Concepts in Music Education, Fifty-Seventh Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1958.

f) Unpublished Materials

Master Thesis

Lightburn, L. T. "The Relation of Critical Fusion Frequency to Age." Unpublished Master's Thesis, University of New Jersey, 1951, (M.A.).

Dissertations (not on microfilm)

Lightburn, L. T. "The Relation of Critical Fusion Frequency to Age." Unpublished Doctoral Dissertation, University of New Jersey, 1951, (Ph.D.).

g) Dissertations on Microfilm

Lightburn, L. T. "The Relation of Critical Fusion Frequency to Age." Unpublished Doctoral Dissertation, University of New Jersey, 1951, (Ph.D.). (Univ. Micro. No. 51-234; D.A. Vol. 20, No. 2501).

2. The Problem (II) Quote here, in condensed form if possible, the exact problem statement as given by the author. The form of the problem statement may be a question(s) or hypotheses. Give page numbers where this statement is found.

Do not confuse the problem statement, if in the form of a question or hypotheses, with the section below which deals with the specific questions to be answered or the hypotheses to be tested in a study.

Purpose. Quote here (in condensed form if possible) the stated purpose of the study. What was the study planned to do; to find out? Give page numbers where statement is found.

Hypotheses or Questions. List here (quote) the author's statement of the specific questions to be answered or the specific hypotheses to be tested. Give page numbers.

3. Methodology (III)

Population. Give here, if applicable, the size and the type of population used in this study. "Type" refers to a complete description of the population sample. "Other" category to be used for indicating a case study of one individual, etc. Give pages.

Sampling Technique. Describe the criteria and procedures employed in obtaining the sample population. Was the sample randomly selected? How was this done? Give page numbers.

Materials. List here all materials and equipment used in the study. Give specific names of materials (tests) and equipment. Give page numbers.

Procedures. List here the specific procedures (in order of application) employed in the study. If validating procedures were employed for any of the materials or personnel used, describe them briefly. Give page numbers.

If study used materials (developed by author--questionnaire), raters, etc., in which validation was necessary, but such validation was not indicated in the procedures, make note of this.

Data Collection Techniques. How were the data collected in the study obtained? --by testing the subjects, observation of the subjects. questionnaire, interview, survey of literature? Describe and give page numbers.

Data Analysis Techniques. Report how the raw data were treated after collection. Were percentages just given; were comparisons made between percentages; were statistical techniques employed--measures of central tendency, measures of relationships, measures of variability, measures of error, prediction techniques? List specific statistical techniques. Describe how they were used. Give page numbers.

Limitations. Report here the limitations recognized by the author in the methodology employed. Give page numbers.

4. Conclusions ((V). List here the author's statement of conclusions. Give page numbers.

If the conclusions are not in keeping with the questions or hypotheses stated, please note on page 5 under heading "Abstractor's General Critical Comments." Follow this procedure in reporting any questionable assumptions found in the reported conclusions--such as generalizing to the total population from a small non-representative sample.

If the author does not state conclusions as such, look for a section entitled "findings" or "results." Record the statements under these headings. Indicate on the Abstract Form (under Conclusions, p. 3) that the statements recorded are not given as conclusions.

Limitations. List here the limitations of the conclusions as given by the author. If no limitations are given, make note of this on page 5.

5. Additional Research Suggested by Author (V). Report here, in outline form, the specific research suggested by the author as further study of the problem or sub-problems of the study. Give page numbers.

6. Abstractor's Evaluation (VI). Place a check mark in that blank which most clearly indicates your opinion about the items identified in each question. If there is any doubt in your mind about your opinion, or if you feel you are not qualified to respond to any item, check the blank below the question mark. Your opinions will not constitute the final evaluation of the study; they will serve only as cues to the project directors in their final evaluation.

In question 10, please identify and describe any feature of the study which you feel is unique for research in music education. Give page numbers.

Abstractor's General Critical Comments. Report here, in outline form, any criticisms or reactions you have to the study. Be specific and give justification for your criticisms or reaction. Also, suggestions as to what could or should have been done.

7. Abstractor's Summary

I. Author, Title, Source. Give complete bibliographic information here as was given on first page of the Abstract Form.

II. Major Faculty Advisor. Give name of faculty advisor if study is a thesis or dissertation.

III. Source of Data. Check the blank which most closely describes the source of data used in the study (see "Data Collection Techniques." p. 3, Abstract Form). Use "other" category for identifying sources of data not listed in this section.

IV. Type of Research. Check the blank which most closely characterizes the type of research represented by the study.

Descriptive Research describes what exists or describes a certain condition. It includes the following types of studies:

a. Survey Studies--school surveys, job analysis, public opinion surveys, community surveys, etc.

b. Interrelationship Studies--case studies, causal-comparative studies, correlation studies

c. Developmental Studies--growth studies, trend studies

Please indicate the specific type of descriptive research (ex. Survey) on the blank following the term "Descriptive."

Experimental Research is concerned with determining what variables account for a certain condition or phenomenon, and how their influence can be accounted for or explained. Research of this type

deliberately controls and manipulates certain variables in order to ascertain how and why a particular condition or event occurs.

Statistical Research is the analysis of published statistical data with inferences and conclusions usually drawn from the analysis. This sometimes is considered a type of descriptive research. Ex. Number of Colleges in the United States offering graduate instruction in music education with enrollments. Analysis could show: a) Number of State Colleges as compared with the number of Private Colleges, b) an inference might be that State Colleges are more concerned with providing music teachers for the public schools than or Private Colleges.

Philosophical Research is concerned with what should be, with the analysis and projection of concepts and constructs. Conclusions are usually a judgement derived through logical argument from many sources of data.

Historical Research describes conditions and occurances that have taken place in the past or traces specific trends through a space of time. Usually this is sheer reporting and verification of factual data.

"Other" is a category for identifying type of research when the study can not be characterized by the descriptive terms listed in this section.

NOTE: It is expected that a large percentage of the studies to be abstracted will fall under the categories of "Descriptive," "Experimental," and "Philosophical" research. The largest number probably will fall within the "Descriptive" category.

V. Problem and/or Purpose. Quote from summary of the study if presented in brief form. If not, summarize in your own words. Refer to p. 1 of Abstract Form.

VI. Procedures. Quote from summary of study if given in brief form. If not, summarize in your own words. Refer to p. 2 of Abstract Form.

VII. Major Findings and/or Conclusions. Quote from summary of study if in brief form. If not, summarize in your own words. (Note instructions concerning Conclusions, p. 5)

NOTE: The Problem and/or Purpose, Procedures, and Major Findings and/or Conclusions sections should contain no more than 250 words.

DO NOT WRITE BELOW THE DOTTED LINE ON THE SUMMARY SHEET.

Exhibit 11

OE 6000 (9-65)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON 25, D.C.

ERIC DOCUMENT RESUME

DATE OF RESUME

1. ACCESSION NO.	2. ERIC SATELLITE CODE	3. CLEARING HOUSE CONTROL NO.	FOR INTERNAL ERIC USE ONLY *(Do Not Write In Space Below)*
4. SOURCE			DATE RECEIVED
			IS MICROFILM COPY AVAILABLE? *(Check one)* ☐ Yes ☐ No
5. TITLE			IS DOCUMENT COPYRIGHTED? *(Check one)* ☐ Yes ☐ No
			HAS COPYRIGHT RELEASE BEEN GRANTED? *(Check one)* ☐ Yes ☐ No
6. AUTHOR(S)			DATE, NAME, AND COMPLETE ADDRESS OF AUTHORITY TYPE OF RELEASE
7. DATE	8. PAGINATION	9. REFERENCES	
10. REPORT/SERIES NO.			
	11. CONTRACT NO.		
12. PUBLICATION TITLE			
13. EDITOR(S)			
14. PUBLISHER			

15. ABSTRACT *(250 words max.)*

16. RETRIEVAL TERMS *(Continue on reverse)*			
17. IDENTIFIERS			

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APPENDIX H

Experimental Thesaurus of Index Terms for Documents in Music Education

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APPENDIX H

Experimental Thesaurus of Index Terms for Documents in Music Education

ability
abnormal children
absenteeism
academic achievement
academic credit
academic status
academic subjects
academically talented
accelerated programs
accreditation
achievement (music) -
  use: music achievement
achievement (academic) -
  use: academic achievement
achievement (performance) -
  use: music achievement
acoustics
activity
adjustment
administration
administrative practice
administrator
administrator influence
admission
adult
aesthetic characteristics
aesthetic needs
aesthetic sensitivity
aesthetic values
affective value
age
alumni
applied music
aptitude (music) -
  use: music aptitude
arranging (music) -
  use: music arranging
art
art ability
art music
art song
art teacher
athletics
attitude
audio aids
audiometer
auditory acuity
auditory image
aural perception
bachelor of music
bachelor of music education
band
basic music
beginning student
beginning teacher
below average
  use: low achiever
boys
brass ensembles
budget
case studies
caucasian
certification
characteristics
chief administrator
child voice
choral music
chorus
church
church influence
city -
  use: urban
class instruction
class piano
class voice
classical music -
  use: art music
classroom discipline
classroom teacher
coeducation
cognitive ability
college
college faculty
community environment
community influence
community music
community participation
community population
community pressure
community size
competence (professional) -
  use: professional competency
competencies (teacher) -
  use: professional competency
composer
composing (music) -
  use: music composing
concert (symphony) -
  use: symphony concert
conducting (music) -
  use: music conducting
conductor -
  use: music conductor
consonance
contemporary music
contest (music) -
  use: music contest
control group
cooperating school
cooperating teacher

cornet
course credit
county
creative activity
creative process
cultural background
curriculum (music) -
  use: music curriculum
curriculum guide
dance band
data analysis
defective hearing
diction
directing (music) -
  use: music conducting
discipline (school) -
  use: student discipline
discrimination (music) -
  use: music discrimination
document analysis
drop-outs
duties -
  use: job specification
ear training
economic depression
economic values
economic status
edition
education courses -
  use: methodology courses
educational film
educational level
educational philosophy
educational radio
effective learning
elective courses
elementary music texts -
  use: music series
elementary school
elementary song books -
  use: music series
embouchure
emotional content
English madrigal
English teacher
enrollment
environment (school) -
  use: school environment
environment (community) -
  use: community environment
environment (home) -
  use: home environment
environmental influence
equipment
esthetic sensitivity
evaluation
experiment
experimental group
exposure
extra-curricula
extrinsic motivation
eye movement
facility (plant, etc.)
faculty
fees
female teacher
festival (music) -
  use: music festival
financial support
financing
folk music
folk song
foreign language
fretted string instruments
functional piano
general education
girls
glee club
grade level
graduate
group instruction
group study
handedness
harmony
harmony perception
hearing
heredity
heterogeneous classes
high school
higher education
home environment
home influence
ideal-concept
improvisation
Indian
individual instruction
individual study
information (music) -
  use: music information
in-service education
instructional materials
instrument selection
instrumental music
instrumentation
intelligence
interests
intermediate grades
interviews
intonation
job specification
job satisfaction
junior high school
keyboard group
keyboard method
kindergarten
kindergarten children
language arts
language listening
large cities
learning
learning experience
liberal arts college

leisure activity
linguistic ability
listening (language) -
use: language listening
listening (music) -
use: music listening
listening skills
low achievers
male teacher
Mannheim School
mass media
master of music
master of music education
materials (music) -
use: music teaching aides
mathematics aptitude
measurement
melody
melody instruments
melody perception
memorization
methodology courses
minor instruments
monotone
motion picture film
motivation
motor ability
motor activity
motor rhythm
motor skills
multiple groups
music
music achievement
music activities
music appreciation
music aptitude
music arranging
music composing
music conducting
music conductor
music content
music contest
music curriculum
music directing -
use: music conducting
music discrimination
music editing
music education (school) -
use: school music
music education objectives
music environment
music experience
music facts -
use: music information
music festival
music history
music identification
music information
music interests
music interpretation
music interval
music listening
music major
music notation -
use: music symbols
music performance
music performance experience -
use: music performance &
music experience
music playing
music preference
music program
music reading (silent) -
use: score reading
music reading (singing) -
use: sight singing
music reading (instrumental) -
use: sight playing
music recognition -
use: music identification
music series
music skills
music specialist
music style
music supervisor
music symbols
music teacher
music teacher education
music teaching aids
music theme perception -
use: music identification
music theory
musical idiom
musical meaning
musical memory
musical order
musicality
musically gifted -
use: musically talented
musically talented
nationality
negative influence
negative practice
Negro
Negro school
Negro college
nonaccredited
nonmusic
nonmusic activities
nonschool experience
nonschool function
nonschool music
nonverbal abilities
notation (music) -
use: music symbols
objectives (music education) -
use: music education objectives
occupational persistence
off-campus
opinion
orchestra
orchestral instruments

organizations
Orlando di Lasso
out-of-school
out-of-town
overlearning
parent
parent influence
parent rating of child
part singing
participant
participation
peer relations
perception (harmony) -
   use: harmony perception
perception (hearing music) -
   use: aural perception
perception (melody) -
   use: melody perception
perception (rhythm) -
   use: rhythm perception
perception (seeing music) -
   use: visual perception
performance (music) -
   use: music performance
performance experience (music) -
   use: music performance and
        music experience
performance group
performance skill
personality
personnel services
philosophy (education) -
   use: educational philosophy
photography
physical characteristics
physical defects
physical maturity
piano
piano (functional) -
   use: functional piano
piano class -
   use: class piano
piano performance
piano study
pitch
pitch discrimination
playing (music) -
   use: music playing
playing instruments -
   use: music playing
playing technique
poetry
popular music
practice
pre-college music
pre-professional experience
pre-school children
prediction of success
principal
private institutions
private lesson -
   use: private music study
private music study
private study (music) -
   use: private music study
problem
professional activities
professional competency
professional experience
professional preparation (music) -
   use: teacher education
professional requirement
program notes
programmed instruction
psychology major
quantitative ability
race
radio
range
rating scale
reading rate
Renaissance Music
repertoire
required courses
rhythm
rhythm perception
rhythmic ability
rhythmic behavior
rhythmic patterns
room temperature
rote learning
rote singing
rural school
salary
scheduling
school administrator
school board
school districts
school enrollment
school environment
school experience
school influence
school music
school principal
science
science aptitude
score reading
secondary school
selection
selection criteria
self-concept
self-contained classroom
self-instruction
senior high school
seventh grade
shape notes
shaped notes -
   use: shape notes
sight playing
sight singing
singing
single group
skills (music) -
   use: music skills

social aspirations
social preference
social status
social studies
socio-economic status
sociometric
sol-fa system -
   use: solfege
solfege
solmization -
   use: solfege
solo
song
song plugging
songbook
sound motion pictures
sponsorship
standardized tests
standards
state
state consultant
state institutions
state laws
state standards
state supervisor
state universities
stringed instruments
strings (music) -
   use: stringed instruments
student
student discipline
student teacher
student teaching
style analysis
subject preference
success (teaching) -
   use: teaching success
summer program
superintendent
supervising teacher
supervision -
   use: supervisory practice
supervisor (music) -
   use: music supervisor
supervisory practice
survey
syllabus
symbols (music) -
   use: music symbols
symphony
symphony concert
tachistoscope
teacher
teacher accreditation
teacher behavior
teacher education
teacher influence
teacher rating of student
teacher-pupil ratio
teacher-student relations
teachers colleges
teaching ability
teaching aids
teaching competency
teaching concepts
teaching effectiveness
teaching load
teaching success
teaching technique
temperament
tempo
tessatura
test
test construction
testing
theatre arts
theatre arts teacher
timbre
tonal concepts
tonal configurations
tonal frequencies
tonal memory
tone quality -
   use: timbre
traditional class instruction
transfer of training
trumpet
undergraduate
university
urban
urban school
use criterion
value systems
viewing
visual aids
visual perception
vocal characteristics
vocal instruction
vocal mechanism
vocal method
vocal music
vocal range
vocal technique
vocational choice
vocational guidance
voice change
voice (child) (children's) -
   use: child voice
vowel
white -
   use: caucasian
white college
white school
woodwinds